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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	92052897
Party	Plaintiff Thomas SkÃ¶ld
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

BRIEF IN OPPOSITION TO REGISTRANT'S MOTION FOR SUMMARY JUDGMENT

AND

CROSS MOTION FOR PARTIAL SUMMARY JUDGMENT

Petitioner files herewith a Brief in Opposition to Registrant's Motion for Summary Judgment, filed 30 April 2013, and a Cross Motion For Partial Summary Judgment.

On the eve of trial, with respect to a fact intensive cause of action, the Registrant has made this Motion for Summary Judgment. The Registrant's motion asserts that Petitioner "has yet to come forward with evidence supporting prior rights." As the Board will see, this mis-represents the extensive discovery that Petitioner Sköld has provided to Registrant. Later statements in the Motion are more couched in caveat: "Petitioner has no evidence of actual use of RESTORADERM as a trademark for any good or service in the United States *sufficient to establish rights* in the mark prior to the Priority

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Date." But the caveat, which is essentially "while there may in fact be evidence, it is not enough" is contrary to the assertions of the Motion that there are no material facts to be delved into. The amount of prior use appropriate in the industry to establish use in commerce of a mark is itself a factual issue critical to, but not addressed in, the motion. The motion, interposed just on the eve of trial, when Registrant was aware of Trial depositions that had been scheduled for May 16 and 17, 2013, is ill founded.

Trial having been postponed, and critical evidence of priority being missing from Registrant's evidence, Petitioner seeks to simplify trial by seeking partial summary judgment.

In considering whether to grant summary judgment, all evidence must be viewed in a light most favorable to the non-movant, and all justifiable inferences are to be drawn in the non-movant's favor. The Board may not resolve disputes of material fact; it may only ascertain whether such disputes are present. See, ChaCha Search, Inc. v. Grape Tech. Grp., Inc., 105 U.S.P.Q.2d 1298 (TTAB Dec. 27, 2012) (Slip Op. at 13).

I. Background

For contextual information, on or about September 12, 2001, the Petitioner Sköld presented to Galderma's predecessor in interest Collagenex the technology that is covered in now issued U.S. Pat. No. 8,029,810. That meeting, and subsequent meetings, resulted in an 11 February 2012 Cooperation, Development and Licensing Agreement ("2002 Agreement", Sköld Decl. Exhibit A) between Sköld and Collagenex relating to the technology. When an 19 August 2004 agreement was put in place between the parties, the technology was expressly referred to as the "Restoraderm"

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technology, as was the consistent terminology used between the parties in a wealth of emails and documents that have been produced to Registrant by Sköld. See, e.g., Epitan Agreement, Sköld Decl. Exhibit B. In February, 2008, Collagenex was acquired by Registrant Galderma. After frustrating years of exchanges with Galderma, the patent portfolio for the Restoraderm technology was returned to Petitioner, but the expectations of Petitioner that the mark would be returned were not realized. Petitioner's disappointed expectations are contrary to Collagenex's own interpretation of its agreement with Sköld as reflected in the terms of a three-way agreement between Collagenex, Sköld and Epitan Limited, signed 9 May 2003, in which Collagenex agreed that, in the event of termination of the 11 February 2002 Agreement for any reason, Sköld was to license "the Restoraderm" ("the water-based lipid topical drug delivery…technology" that is the subject of the 12 February 2002 Agreement) to Epitan for developing a product. See Sköld Decl. Exhibit B at SKOLD-000018 and 000028.

II. Brief in Opposition

A. Allegation of No Product Sales or Transport

At part IV(A)(1) of the Motion, Registrant asserts that "specifically" Petitioner "has produced no evidence that goods bearing the mark in any manner were sold or transported in the United States prior to the Priority Date." Yet, in Petitioner's verified response to Registrant's Request for Admission 16 (asserting "Petitioner did not sell goods prior to February 11, 2002 that bore the RESTORADERM mark in any manner"), Petitioner denied the allegation and stated "Petitioner made bona fide efforts to sell goods that bore the RESTORADERM mark prior to this date, and goods that bore the

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RESTORADERM mark were transferred to at least one commercially motivated party prior to February 11, 2002." See Exhibit 1 (Sköld's Resp. Reg. 1st Req. Admissions). In response to Interrogatory No. 6, Sköld stated that "in November or December of 2001, samples labeled 'RESTORADERM Technology' were delivered to Collagenex." See Exhibits 2 and 3 (Sköld's Resp. Reg. 1st Set of Interrog., and supplement). In response to Interrogatory No. 5, Sköld stated that "In late 2001, ... Petitioner delivered to Collagenex RESTORADERM labeled samples of a base formulation for RESTORADERM Technology." Registrant knows that Petitioner Sköld operates in Sweden, so Registrant knows that the product was manufactured in Sweden. Thus, product transferred to a commercially motivated party the U.S., with transport across international borders. This is further indicated in the produced discovery in Sköld's denial of Request for Admission No. 1 (asserting "Petitioner did not use the term RESTORADERM in commerce in connection with any product prior to February 11, 2002"). See Exhibit 1. The denial meant that Petitioner used the mark in U.S. commerce prior to February 11, 2002. Petitioner will testify, as shown in the attached Declaration of Sköld, that the samples in question were manufactured in Sweden, transported to the U.S. from Sweden, and provided to Collagenex in 2001. See Exhibit 4 at ¶6 (Declaration of Sköld).

Registrant knows, or should know, from its own records and Petitioner's response to Registrant's First Set of Interrogatories that these products and services (technology) selling efforts led to $[redacted] in payments from Collagenex to Sköld over the course of the cooperative relationship between Sköld and Collagenex. See Rsp. to No. 8, Exibit 2. See also Sköld Decl. Exhibit C at SKOLD-000659 (General

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Counsel of Collagenex asserting over [redacted] dollars in payments from Collagenex to Sköld).

At part IV(A)(1)(a) of the Motion, the Motion implies backhandedly that the goods did not exist prior to 28 February 2002. Yet, as shown above, Registrant had in its possession discovery from Registrant to the effect that it did exist, and that it existed in the United States. One cannot review the discovery to date and credibly assert or imply that there was no evidence of the product existing prior to 28 February 2002. Thus, this section of the Motion is without merit.

At part IV(A)(1)(b) of the Motion, Registrant asserts that Petitioner, during the course of discovery, "was unable to identify even a single qualifying sale." That is true only in the sense that Petitioner never stated: here was a sale. However, the evidence discussed above clearly shows a sale. Petitioner showed the concept of the technology and samples of the product, samples were delivered in direct connection with these demonstrations, and the 11 February 2002 Agreement, under which he was paid $1,022,500 over a course of approximately two years, was thereby obtained. See Rsp. to No. 8, Exhibit 2. The email produced by Sköld from Robert Ashley, Senior Vice President for Commercial Development, a founder of Collagenex, which Registrant labeled SKOLD-000036, shows that the 2004 Agreement merely replaces the financial structure of the 2002 Agreement (See Sköld Decl. Exhibit D), and thus payments under the later agreement reflect the fruits of the sale initiated on or about 12 September 2001, followed up with sample transfers in November and December of 2001. Sköld was paid an additional $1,417,080 under the 2004 Agreement. See Rsp. to No. 8, 0045. Thus, payments of $2,439,580 have their genesis before February 28, 2002, and are

connected to the transfer of sample to Collagenex. This level of payment is not in substantial dispute since the General Counsel of Collagenex admitted payments in excess of [redacted] dollars in a letter to Sköld's attorneys dated 12 February 2009. See Sköld Decl. Exhibit C at SKOLD-000659. Thus, there was a significant sale of the product was made before February 28, 2002.

At part IV(A)(1)(c) of the Motion, Registrant asserts that Petitioner has no evidence of commercial transportation, then misleadingly cites Simmons v. Western Publ'g Co., 834 F.Supp. 393, 397, 31 USPQ2d 1143, 1146 (N.D. Ga. 1993) for the assertion that the transportation must be public. In Simmons, the relevant public for a children's board game is quite different from that public at issue here. Jurisprudential support for the point the Simmons court was making tracks through its citation of Walt Disney Prods. v. Kusan, Inc., 1979 WL 25051, 204 U.S.P.Q. 284, 287 (C.D. Cal. 1979), which in turn relies upon New West Corp. v. NYM Co. of Cal., Inc., 595 F.2d 1194, 1200, 202 USPQ 643, 648 (9th Cir.1979), which in turn directly quotes New England Duplicating Co. v. Mendes 190 F.2d 415, 90 USPQ 151, 153 (1St Cir. 1951) for the following:

> "... the question of use adequate to establish appropriation ***remains one to be decided on the facts*** of each case, and that evidence showing, first, adoption, and second, use in a way sufficiently public to identify distinguish the marked goods ***in an appropriate segment of the public mind*** as those of the adopter of the mark, is competent to establish ownership, even without evidence of actual sales."
>
> [Emphasis added]

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Thus, the question is highly fact specific, turns on the relevant business context, and in particular on the appropriate buying public.

Moreover, in connection with the 1988 amendments to the Lanham Act that eliminated "token use" as a basis for registration, and in particular in connection with the definition of use in commerce found at §45 (15 U.S.C. 1127), the House Judiciary Report on H.R. 5372, H.R. No. 100-1028,p. 15 (Oct. 3, 1988) stated:

> [T]he [House Judiciary] Committee recognizes that the "ordinary course of trade" varies from industry to industry. Thus, for example, it might be in the ordinary course of trade for an industry that sells expensive or seasonable products to make infrequent sales. Similarly, a pharmaceutical company that markets a drug to treat a rare disease will make correspondingly few sales in the ordinary course of its trade; the company's shipment to clinical investigators during the Federal approval process will also be in its ordinary course of trade.

The report of the Senate Judiciary Committee stated:

> The committee intends that the revised definition of “use in commerce” be interpreted flexibly so as to encompass various genuine, but less traditional, trademark uses, such as those made in test markets, infrequent sales of large or expensive items, or ongoing shipments of a new drug to clinical investigators by a company awaiting FDA approval....

S. Rep. No. 515, 100th Cong. 2d Sess. 44-45 (1988). Similarly, the Board has found that use in commerce "should be interpreted with flexibility to account for different

industry practices." Automedx, Inc. v. Artivent Corporation, 95 USPQ2d 1976 (TTAB 2010)(Slip op. at 14). The "public" relevant to show use under §2 of the Lanham Act (15 U.S.C. §1052) is not narrower.

Sköld was selling to a select public, those who will invest serious money to develop medicated dermatology products. From the evidence, it is clear that Sköld could complete one sale to a party and generate approximately [redacted] dollars U.S. therefrom. The consideration Sköld received was thus far from token. The evidence Sköld has provided to Registrant includes evidence transport of labeled product to Collagenex from Sweden, as discussed above, and that Sköld had come to the United States to make sales presentations to Neutrogena/ Johnson & Johnson/ Ortho Derm, Medicis and Allergan, at least two whom had received a "Mode of Action" description for "Restoraderm" technology. See Rsp. to No. 6, Exhibits 2 and 3; and Sköld Decl. Exhibit E (Mode of Action). In September 2001, Sköld used the mark Restoraderm with the third, Allergan, in connection with the technology. See Rsp. to No. 6, Exhibits 2 and 3.

The attached Declarations of Sköld and Jeffrey S. Day, both long time participants and executives in the dermatology development business, attest to the kind of transaction here reported being in the ordinary course of this trade. See Exhibit 4 at ¶9 (Declaration of Sköld); Exhibit 6 at ¶7 (Declaration of Day).

Accordingly, it is clear from evidence in Registrant's possession that Sköld's activities in 2001 were selling and transporting efforts relevant to utilizing "Restoraderm" as a trademark *to the relevant public*. Thus, the motion should be denied

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B. Allegation of No Rendering of Services

Part IV(A)(2) of Registrant's motion is responded to in good part by reference to the above discussion. This part of the motion asserts that Petitioner did not provide services in the United States prior to Registrant's priority date.

One might conceivably factually dispute the amounts Collagenex paid that were for sample, or for the services of designing and manufacturing product. But nonetheless, it is clear that a substantial amount of the payments were for services. The preamble of the 2002 Agreement states:

> WHEREAS Skold is developing, will continue to develop and has rights to the Technology (as defined hereafter) and the potential Products (as defined hereafter) resulting there from and desires to develop said technology in conjunction with CollaGenex in accordance with the terms and conditions hereof; and
>
> WHEREAS CollaGenex is desirous to participate in and control the development of the technology as defined herein and to obtain all rights thereto in accordance with the terms and conditions hereof…

Thus, the contract says that Sköld will provide product development services, and Collagenex will work with Sköld. In Section 3.1(a), Collagenex agrees to pay Sköld substantial sums for formulation work. In Section 3.1(b), Collagenex agrees to pay Sköld substantial sums for a lipid study and a skin water loss study. In Section 3.1(c), Collagenex agrees to pay Sköld substantial sums for clinical studies. In Section 3.1(d), (e) and (f), Collagenex agrees to pay Sköld substantial sums for each of three stable formulations of Restoraderm, and manufacturing specifications therefor. All of these

above outlined payments were made, as admitted by Collagenex in the Ashley email discussed above. See Sköld Decl. Exhibit D. In Section 3.1(h), Collagenex agrees to pay Sköld substantial annual sums for ***consulting services***. Accordingly, it is quite clear from the evidence that the 11 February 2002 agreement was for services.

Contrary to the implications of Registrant's discussion in its part IV(A)(2), promotions in the United States, or any one state thereof, resulting in the purchase by United States citizens of services rendered outside the United States constitutes use in commerce. International Bancorp, LLC v. Societe des Bains de Mer et du Cercle des Estrangers a Monaco, 329 F.3d 359, 366, 66 USPQ2d 1705 (4th Cir. 2003). More expansively, it has been found that offering services over the Internet is use in commerce, since the services are available to U.S. nationals. Planned Parenthood Federation of America, Inc. v. Bucci, 42 USPQ2d 1430, n. 7 (S.D.N.Y. 1997). Petitioner is making no claim as expansive as found in Planned Parenthood, but is asserting that he promoted his services to companies in the United States, provided samples of a formulation according to the services, and signed a contract for providing income clearly tied to services of at least $790,000 plus $150,000 per annum. The promotional activity was at least as early as 12 September 2001, with the Petitioner in the United States to provide such promotions, and a contract was formed for providing the services to Collagenex, a Pennsylvania resident, Delaware incorporated company on 11 September 2001.

Moreover, Petitioner will testify, as shown in the attached Declaration of Sköld, that he and an assistant manufactured Restoraderm formulation on behalf of

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Collagenex in Sweden after 11 February 2002 and before 28 February 2002. See Exhibit 4 at ¶12.

Thus, the assertions in this section of Registrant's motion are without merit.

C. Allegation of No Analogous Use

In Part IV(B) of the motion the Registrant focuses on language in court opinions on ***analogous use*** in commerce as a basis for proving priority. Again, the motion fails to take into account the nature of the relevant market. In any case, Petitioner is primarily asserting actual use of the mark in commerce. In the least favorable interpretation of the facts asserted and evidenced, actual trademark use occurred when Collagenex signed a contract to pay for Sköld services on 11 February 2002. That proof is sufficient to overcome any rights of Registrant.

But, let us suppose that the use in 2001 was merely analogous and not actual. The "identification" of Restoraderm dermatology formulation with Sköld needed to be in the minds of the ***appropriate public***. There were at most 15 dermatology companies in the United States in late 2001 early 2002 that could credibly develop new dermatology formulations. See Exhibit 4 at ¶¶13-14; Exhibit 6 at ¶¶10-11. The evidence of record shows that Sköld presented his services, under the Restoraderm mark, to Neutrogena/Johnson & Johnson/Ortho Derm, Medicis, Allergan and Collagenex. See Rsp. to No. 6, Exhibits 2 and 3. Collagenex was just emerging into the group of credible dermatology development companies. For the sake of argument, we can discount it. Thus, Sköld presented the services under the mark to the relevant purchasing agents of 3 out of 15 of the relevant public, or 20%. These presentations were made under circumstances of preparation for scheduled business development meetings such that

the technology would be memorable – thus providing an enviable advertising penetration for a new product. In other words, there was an enviable association in the minds of the relevant public between Restoraderm and Sköld's technology. Accordingly, Sköld's September 2001 activities were at least analogous use.

As stated in T.A.B. Sys. v. PacTel Teletrac, 77 F.3d 1372, 1376, 37 USPQ2d 1879, 1881 (Fed. Cir. 1996), cited by Registrant, we look to the "actual perception of the ***potential consumers*** of the service." Herbko Int'l Inc. v. Kappa Book Inc., 308 F.3d 1156, 1162, 64 USPQ2d 1375, 1378 (Fed. Cir. 2002) makes the same point, that the association needed is with the ***purchasing public***. Specifically, the activities need to "reasonably be expected to have a substantial impact on the purchasing public." Herbko Int'l at 1162, 64 USPQ2d at 1378. Such an impact for the Sköld product has been shown above.

In T.A.B. Sys., the consuming public was the large car buying public, and accordingly the activities recited there were not well directed to that public. T.A.B. Sys. at 1372, 37 USPQ2d at 1880. Herbko Int'l is again a case where the consuming public was the large segment of the public interested in crossword puzzles, and is thus not germane here – where there is a more select group that is the purchasing public. In Westrex Corp. v. New Sensor Corp., 83 U.S.P.Q.2d 1215, 1217 (T.T.A.B. 2007), the purchasing public was the potential buyers of vacuum tubes. A report available at http://business.highbeam.com/industry-reports/equipment/electron-tubes states that according to "U.S. Census data, the [electron tube] industry shipped $1.05 billion in electron tubes and tube parts in 2009 followed by $1.2 billion in 2010." See Jackson Decl. Exhibit A. Moreover, "Tube amplifiers [which use vacuum tubes] have retained a

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loyal following amongst some audiophiles and musicians." Jackson Decl. Exhibit B. There are numerous manufacturers of vacuum tube audio equipment. Jackson Decl. Exhibit C. Thus, smaller scale outreaches do not substantially penetrate this vacuum tube purchasing public. The facts germane in the current case show a substantial impact on 20% of the buying public.

Accordingly, Registrant's arguments on lack of analogous use fail.

D. Use in United States Is Broader than Use in Commerce

Moreover, it is clear that use in the United States, as relevant to Section 2(d) of the Lanham Act (15 U.S.C. § 1052(d)), is a broader concept than use in U.S. commerce, or use in foreign commerce with the United States. First Niagara Insurance Brokers, Inc., Appellant, v. First Niagara Financial Group, Inc., 476 F.3d 867, 871 81 USPQ2d 1375 (Fed. Cir. 2007). Petitioner submits that the above-outlined evidence more than shows use in the United States with the relevant public.

E. Conclusion

As outlined above, all the bases for summary judgment laid out in the Registrant's motion fail. Accordingly, Petitioner submits that the motion must be denied.

III. Cross Motion for Partial Summary Judgment

A. Registrant Has No Evidence of Use Prior to 28 Feb. 2002

Registrant admits that it had no use in commerce of the mark Restoraderm in connection with product prior to 28 February 2002. See Exhibit 5. There has been no evidence of any kind produced by Registrant suggestive that there was any use prior to 28 February 2002. Accordingly, Petitioner submits that it is appropriate to simplify the

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issues for consideration at trial by finding on summary judgment that Registrant made no use of the mark Restoraderm prior to 28 February 2002.

B. Petitioner Has Established Use Prior to 28 Feb. 2002

As outlined above in Section II, Petitioner has provided evidence that he used the mark Restoraderm on 11 September 2002 in his meeting with Johnson & Johnson/ Neutrogena/ Ortho Derm. Exhibit 4 at ¶5 (Sköld Declaration). Registrant has produced no evidence to the contrary.

Petitioner has provided evidence that he used the mark Restoraderm on 12 September 2001 in his meeting with Collagenex. Exhibit 4 at ¶¶4, 10. See also Exhibit 6 at ¶¶4-5 (Day Declaration); Sköld Decl. Exhibit D (Ashley admission of payments under 2002 Agreement); Sköld Decl. Exhibit C (Collagenex General Counsel's admission of in excess of [redacted] U.S. in payments to Sköld). Registrant has produced no evidence to the contrary.

Petitioner has provided evidence that he used the mark Restoraderm in September 2001 in his interactions with Medicis and Allergan. Exhibit 4 at ¶5. Registrant has produced no evidence to the contrary.

Petitioner has provided evidence that he used the mark Restoraderm in November and December 2001 when he manufactured the Restoraderm formulation in Sweden and transported it to Collagenex. Exhibit 4 at ¶6. Registrant has produced no evidence to the contrary.

Petitioner has provided evidence that he used the mark Restoraderm on or about 18 January 2002 when he manufactured the Restoraderm formulation in Sweden and

transported it to Collagenex at the Caribbean Derm meeting in Puerto Rico. Exhibit 4 at ¶6. Registrant has produced no evidence to the contrary.

Petitioner has provided evidence that he used the mark Restoraderm on or about 11 February 2002 when the 2002 Agreement was executed by him and Collagenex. Sköld Decl. Exhibit A. See also Exhibit 4 at ¶11, Exhibit 5 at ¶¶8. Registrant has produced no evidence to the contrary.

That there was substantial financial consideration related to these activities is clear from the evidence. Sköld Decl. Exhibit D (Ashley admission of payments under 2002 Agreement); Sköld Decl. Exhibit C (Collagenex General Counsel's admission of in excess of [redacted] U.S. in payments to Sköld). Registrant has produced no evidence to the contrary.

Accordingly, Petitioner submits that it is appropriate to simplify the issues for consideration at trial by finding on summary judgment that Petitioner had prior use of the mark Restoraderm under §2(d) of the Lanham Act (15 U.S.C. §1052(d)) on 11 Sept 2001, on 12 September 2001, in November 2001, in December 2001, on or about 18 January 2002, and on 11 February 2002.

In summary, Petitioner submits that the Board should simplify the issues for consideration at trial by finding on summary judgment that:

a. Registrant made no use of the mark Restoraderm prior to 28 February 2002; and

b. Petitioner had prior use, relative to Registrant, of the mark Restoraderm under §2(d) of the Lanham Act (15 U.S.C. §1052(d)) on 11 Sept 2001, on

12 September 2001, in November 2001, in December 2001, on or about 18 January 2002, and on 11 February 2002.

Respectfully submitted,

Date: May 15, 2013 By: _____

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Attorney for Petitioner

Attachments:

- Exhibit 1: Sköld's Response to Registrant's First Request for Admissions;
- Exhibit 2: Sköld's Response to Registrant's 1st Set of Interrogatories;
- Exhibit 3: Sköld's Supplemental Response to Registrant's 1st Set of Interrogatories;
- Exhibit 4: Declaration of Sköld, and Exhibits A through E thereto;
- Exhibit 5: Registrant's Supplemental Response to Request for Admissions;
- Exhibit 6: Declaration of Day;
- Exhibit 7: Declaration of Jackson.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

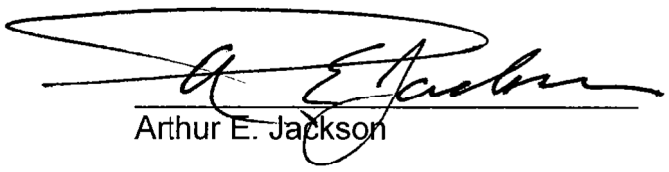
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Petitioner's Brief in Opposition to Motion for Partial Summary Judgment (PUBLIC version) was sent by email on this 15th of May, 2013 to:

Jeff.Becker@haynesboone.com

I hereby certify that a copy of the foregoing Petitioner's Brief in Opposition to Motion for Summary Judgment (Confidential version) was sent by email on this 15th of May, 2013 to:

Jeff.Becker@haynesboone.com



Arthur E. Jackson

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Sköld Brief Exhibit 1
(Sköld's Response to Registrant's First Request for Admissions)

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N THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

BOX TTAB/FEE
Commissioner for Trademarks
2900 Crystal Drive
Arlington, VA 22202-3513

PETITIONER SKÖLD'S RESPONSE TO REGISTRANT'S FIRST REQUESTS FOR ADMISSIONS

Pursuant to Rules 26 and 36 of the Federal Rules of Civil Procedure, Petitioner Thomas Sköld ("Sköld"), by and through its undersigned counsel, submits this response to the Registrant's First Requests for Admissions as follows set forth below.

The statement that "Petitioner denies/admits this assertion" or equivalent language signifies that Petitioner denies/confirms the Request for Admission immediately preceding the language.

Request for Admission 1:
Petitioner did not use the term RESTORADERM in commerce in connection with any product prior to February 28, 2002.

Petitioner denies this assertion.

Request for Admission 2:
Petitioner did not use the term RESTORADERM in commerce in connection with any product prior to February 11, 2002.

Petitioner denies this assertion.

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Request for Admission 3:
Petitioner did not use the term RESTORADERM in commerce in connection with any service prior to February 28, 2002.

Petitioner denies this assertion.

Request for Admission 4:
Petitioner did not use the term RESTORADERM in commerce in connection with any service prior to February 11, 2002.

Petitioner denies this assertion.

Request for Admission 5:
The date of first use in commerce of Registrant's Mark precedes the date of first use in commerce of Petitioner's alleged use of the mark RESTORADERM on or in connection with the sale, offer for sale, and/or distribution of any product or service.

Registrant's first use in commerce of Reg. No. 2985751 appears to be 27 May 2005. Registrant's first use in commerce of Reg. No. 3394514 appears to be 21 June 2007. Given these dates, Petitioner denies this assertion.

Request for Admission 6:
Petitioner has never owned any U.S. trademark rights in the mark RESTORADERM.

Petitioner denies this assertion.

Request for Admission 7:
CollaGenex used the mark RESTORADERM in commerce before any use of the mark RESTORADERM in commerce by Petitioner commenced.

Petitioner denies this assertion.

Request for Admission 8:
Registrant's trademark rights in Registrant's Mark predate Petitioner's alleged rights in the mark RESTORADERM.

Petitioner denies this assertion.

Request for Admission 9:
Petitioner owns two pending U.S. trademark applications to register a trademark incorporating the term RESTORADERM.

Petitioner admits this assertion.

Request for Admission 10:
The goods listed in the two U.S. trademark applications referenced in Request for Admission 9 are both for a lipid structural matrix, one of which is intended to be sold as a component of dermatological preparations and the other as a component of a pharmaceutical preparation.

Petitioner admits this assertion.

Request for Admission 11:
A single product can be both a dermatological preparation and a pharmaceutical preparation.

Petitioner denies this assertion.

Request for Admission 12:
The U.S. trademark applications referenced in Request for Admission 9 list different classes of goods, namely, one lists International Class 1 and the other lists International Class 5.

Petitioner admits this assertion.

Request for Admission 13:
Petitioner did not sell goods prior to February 28, 2002 that bore the RESTORADERM mark in any manner.

Petitioner denies this assertion.

Request for Admission 14:
Petitioner did not sell goods prior to February 11, 2002 that bore the RESTORADERM mark in any manner.

Petitioner denies this assertion in that: Petitioner made bona fide efforts to sell goods that bore the RESTORADERM mark prior to this date, and goods that bore the RESTORADERM mark were transferred to at least one commercially motivated party prior to February 11, 2002. Petitioner acknowledges that there was not transfer of consideration to Sköld in exchange for the goods prior to February 11, 2002, nor a memorialized agreement for consideration prior to this date.

Request for Admission 15:
Petitioner did not sell goods prior to February 28, 2002 in containers bearing the RESTORADERM mark.

Petitioner denies this assertion.

Request for Admission 16:
Petitioner did not sell goods prior to February 11, 2002 in containers bearing the RESTORADERM mark.

Petitioner denies this assertion in that: Petitioner made bona fide efforts to sell goods that bore the RESTORADERM mark prior to this date, and containers of goods that bore the RESTORADERM mark were transferred from him to at least one commercially motivated party prior to February 11, 2002. Petitioner acknowledges that there was not transfer of consideration to Sköld in exchange for the goods prior to February 11, 2002, nor a memorialized agreement for consideration prior to this date.

Request for Admission 17:
Petitioner did not sell goods prior to February 28, 2002 that were associated with displays bearing the RESTORADERM mark.

Assuming containers (e.g., vials) bearing the RESTORADERM mark are deemed associated with displays bearing the RESTORADERM mark, Petitioner denies this assertion in the same manner as for Request for Admission 16.

Request for Admission 18:
Petitioner did not sell goods prior to February 11, 2002 that were associated with displays bearing the RESTORADERM mark.

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Assuming containers bearing the RESTORADERM mark are deemed associated with displays bearing the RESTORADERM mark, Petitioner denies this assertion in the same manner as for Request for Admission 16.

Request for Admission 19:
Petitioner did not sell goods prior to February 28, 2002 with tags or labels affixed thereto that bore the RESTORADERM mark.

Petitioner denies this assertion in the same manner as for Request for Admission 16.

Request for Admission 20:
Petitioner did not sell goods prior to February 11, 2002 with tags or labels affixed thereto that bore the RESTORADERM mark.

Petitioner denies this assertion in the same manner as for Request for Admission 16.

Request for Admission 21:
Petitioner did not transport goods prior to February 28, 2002 that bore the RESTORADERM mark in any manner.

Petitioner denies this assertion.

Request for Admission 22:
Petitioner did not transport goods prior to February 11, 2002 that bore the RESTORADERM mark in any manner.

Petitioner denies this assertion.

Request for Admission 23:
Petitioner did not transport goods prior to February 28, 2002 in containers bearing the RESTORADERM mark.

Petitioner denies this assertion.

Request for Admission 24:
Petitioner did not transport goods prior to February 11, 2002 in containers bearing the RESTORADERM mark.

Petitioner denies this assertion.

Request for Admission 25:
Petitioner did not transport goods prior to February 28, 2002 that were associated with displays bearing the RESTORADERM mark.

Assuming containers bearing the RESTORADERM mark are deemed associated with displays bearing the RESTORADERM mark, Petitioner denies this assertion.

Request for Admission 26:
Petitioner did not transport goods prior to February 11, 2002 that were associated with displays bearing the RESTORADERM mark.

Assuming containers bearing the RESTORADERM mark are deemed associated with displays bearing the RESTORADERM mark, Petitioner denies this assertion.

Request for Admission 27:
Petitioner did not transport goods prior to February 28, 2002 with tags or labels affixed thereto that bore the mark RESTORADERM.

Petitioner denies this assertion.

Request for Admission 28:
Petitioner did not transport goods prior to February 11, 2002 with tags or labels affixed thereto that bore the mark RESTORADERM.

Petitioner denies this assertion.

Request for Admission 29:
Petitioner has never received approval from the U.S. Food and Drug Administration to sell or distribute any product within the United States.

Petitioner confirms this assertion.

Request for Admission 30:
In the 2002 Agreement, Petitioner granted all interest and title in and to the trademark RESTORADERM to CollaGenex.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and interpret the 2002 Agreement for themselves. Nonetheless, Petitioner acknowledges that literal words that form the basis for Registrant's Request for Admission 30 are found in the 2002 Agreement at Section 2.1(a). However, for reasons set forth in detail in the Amended Petition, Petitioner's Response in Opposition to Motion to Dismiss, and his Brief in Opposition to Motion to Dismiss or Strike (which are incorporated herein), Petitioner denies this assertion. Petitioner acknowledges the meaning that was intended for the cited literal language: namely, had the consideration requisite to that cited language been paid, the trademark RESTORADERM would be the exclusive property of Registrant.

Request for Admission 31:
In the 2002 Agreement, Petitioner agreed that all rights in the trademark RESTORADERM were to be the exclusive property of CollaGenex both during the term of the 2002 Agreement and thereafter.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and interpret the 2002 Agreement for themselves. Nonetheless, Petitioner acknowledges that literal words that form the basis for Registrant's Request for Admission 31 are found in the 2002 Agreement, at Section 4.2.1. However, for reasons set forth in detail in the Amended Petition, Petitioner's Response in Opposition to Motion to Dismiss, and his Brief in Opposition to Motion to Dismiss or Strike (which are incorporated herein), Petitioner denies this assertion. Petitioner acknowledges the meaning that was intended for the cited literal language: namely, had the consideration requisite to that recited language been paid, the trademark RESTORADERM would be the exclusive property of Registrant.

Request for Admission 32:
In the 2002 Agreement, CollaGenex granted a license to Petitioner to use Registrant's Mark.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and

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interpret the 2002 Agreement for themselves. Nonetheless, Petitioner acknowledges that a back-license, a common occurrence in exclusive licensing agreements, was granted to Petitioner in the 2002 Agreement.

Request for Admission 33:
Any use in commerce of the mark RESTORADERM by Petitioner between in or about February 2002 and in or about November 2009 inured to Registrant's benefit.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and interpret the 2002 Agreement for themselves. Nonetheless, Petitioner acknowledges that Petitioner's use of the mark RESTORADERM inured to the benefit of Registrant, but solely to the extent Registrant remained the exclusive licensee of Petitioner, and upon Registrant's termination of such license, such previously licensed use inured to the benefit of Petitioner.

Request for Admission 34:
The 2004 Agreement contains no provision identifying Registrant's Mark.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and interpret the 2004 Agreement for themselves.

Request for Admission 35:
The 2004 Agreement contains no provision affecting right, title, or interest in or to Registrant's Mark.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and interpret the 2004 Agreement for themselves. Nonetheless, Petitioner denies this assertion with reference to Section 2.1(d).

Request for Admission 36:
The definition of "Restoraderm Intellectual Property" in the 2004 Agreement included patent and know-how rights, but not the trademark rights.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and interpret the 2004 Agreement for themselves.

Request for Admission 37:
The definition of "Purchased Assets" in the 2004 Agreement included no trademark rights.

Petitioner objects to this Request for Admission, as Registrant and the Board can read and interpret the 2004 Agreement for themselves. Nonetheless, Petitioner denies this assertion. The definition of "Purchased Assets" in the 2004 Agreement refers to "all goodwill" relating to "Restoraderm Intellectual Property."

Request for Admission 38:
Eczema is accurately described as a skin disorder.

Petitioner confirms that, in his opinion, this assertion is factual.

Request for Admission 39:
Registrant's products currently offered under Registrant's Mark are accurately described as treatments for eczema.

The assertion is insolubly ambiguous, and objected to on that basis. Under one interpretation, the

request is irrelevant and is not reasonably calculated to lead to the discovery of admissible evidence. If the assertion is interpreted as asking the relevant question of whether Registrant is selling a product that it promotes as a THERAPEUTIC SKIN CARE PREPARATIONS AND TREATMENT OF SKIN DISORDERS, then Petitioner denies the assertion. If one answers the question of what "treatment" is, in some very broad way, such as to cover a skin moisturizer, it still would not transform what Registrant is commercializing to a treatment. Registrant must sell a treatment, irrespective of whether one could devise a definition of "treatment" that would might cover moisturizing.

Request for Admission 40:
Registrant's products currently offered under Registrant's Mark are marketed as treatments for eczema-prone skin.

Petitioner denies this assertion, as outlined in response to Request for Admission 39.

Request for Admission 41:
Registrant's products currently offered under Registrant's Mark are marketed as therapies for eczema prone skin.

Petitioner denies this assertion, as outlined in response to Request for Admission 39.

Request for Admission 42:
Registrant's products currently offered under Registrant's Mark are accurately described as "therapeutic skin care preparations."

Petitioner denies this assertion, as outlined in response to Request for Admission 39.

Request for Admission 43:
Registrant's products currently offered under Registrant's Mark are accurately described as "treatments for skin disorders."

Petitioner denies this assertion, as outlined in response to Request for Admission 39.

Request for Admission 44:
Registrant has never abandoned rights in Registrant's Mark.

Petitioner denies this assertion, for the reasons set forth in the Amended Petition, which is incorporated herein.

Request for Admission 45:
Petitioner has no evidence that Registrant ceased using the mark RESTORADERM in connection with therapeutic skin care preparations.

Petitioner denies this assertion.

Request for Admission 46:
Petitioner has no evidence that Registrant ceased using the mark RESTORADERM in connection with treatments for skin disorders.

Petitioner denies this assertion.

Request for Admission 47:

Petitioner has no evidence that Registrant ceased using the mark RESTORADERM in connection with therapeutic skin care preparations with no intention of resuming such use.

Petitioner denies this assertion.

Request for Admission 48:

Petitioner has no evidence that Registrant ceased using the mark RESTORADERM in connection with treatments for skin disorders with no intention of resuming such use.

Petitioner denies this assertion.

Request for Admission 49:

Petitioner was aware of Registrant's filing of either or both of the U.S. trademark applications for RESTORADERM, which applications matured into U.S. Trademark Registration Nos. 3,394,514 and 2,985,751, upon the date of the filing of such applications.

Petitioner was aware of the filing that matured to U.S. Trademark Registration No. 2,985,751 in the relative time frame of the date of filing, though he cannot recall if was aware of the filing on the date of the filing. Petitioner cannot confirm or deny whether he knew of the filing for the '751 registration on the date of that filing. Petitioner denies any other aspect of this Request for Admission.

VERIFICATION

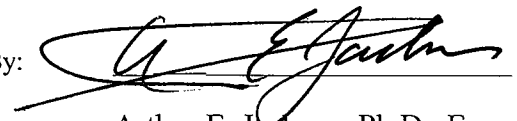
Thomas Sköld, acknowledging that this verification is made under penalty of perjury, states that he has read the foregoing Petitioner Sköld's Response to Registrant's First Requests for Admissions, and that to the best of his knowledge, information and belief, the facts set forth therein are true and correct.

DATED: March 15, 2012

Thomas Sköld

Respectfully submitted,

Date: March 15, 2012

By: 

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Attorney for Petitioner

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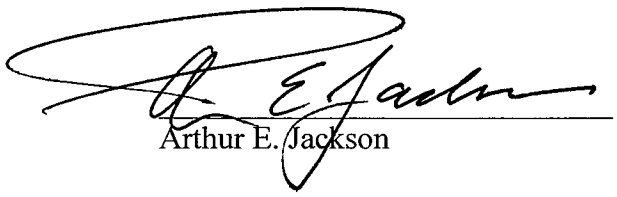
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Petitioner Sköld's Response to Registrant's First Request for Admissions was sent by email on this 15th of March, 2012 to:

Jeff.Becker@haynesboone.com



Arthur E. Jackson

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Sköld Brief Exhibit 2
(Sköld's Response to Registrant's 1st Set of Interrogatories)

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N THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

PETITIONER SKÖLD'S RESPONSE TO REGISTRANT'S FIRST SET OF INTERROGATORIES

Pursuant to Rules 26 and 33 of the Federal Rules of Civil Procedure, Petitioner Thomas Sköld ("Sköld"), by and through its undersigned counsel, submits this response to the Registrant's First Set of Interrogatories as set forth below.

As a general note, applicable to multiple Interrogatories, Petitioner's RESTORADERM Technology is based on (a) compositions of stratum corneum lipids (phospholipids/ceramide/ cholesterol/fatty acid), and (b) the presence of different macromolecular aggregates formed of the lipids. Its primary intent is for formulation for delivering pharmaceutically active substances into or through the dermis of a patient. But Sköld's use of the trademark has extended to the vehicle. References herein to the "RESTORADERM Technology" are references to technology encompassing (a) and (b).

As a general note, the responses below may speak of "Registrant," where the context should make clear whether the referenced party was, at the time of events recited, Galderma Laboratories, Inc. ("Galderma") or its predecessor in interest, Collagenex Pharmaceuticals, Inc. ("Collagenex"). At other times, the specific such party may be called out.

Interrogatory No.1:
Identify all documents upon which Petitioner intends to rely in this proceeding.

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Response to Interrogatory No. 2:
These documents are provided in the First Updated Initial Disclosures served herewith.

Interrogatory No.2:
Identify each person whom Petitioner may call to testify on his behalf in this proceeding.

Response to Interrogatory No. 1:
At this time, these persons are Jeff Day, Mats Silvander, Andrew Powell, Quintin Cassady, Bill Carson, Current Galderma Vice President for Regulatory Affairs, Arthur Clapp, Brian Gallagher, James Marks and Rob Ashley.

Petitioner has the following contact information:

Jeff Day CEO	Quinnova Inc	info@quinnova.net
	Cell Ph. 215-534-4549	Office Ph. 215-860-6263
Mats Silvander	Ponsus Pharma Cell Ph. (+46) 705082646	msilvander@yahoo.se
Andrew Powell		akwpowell@yahoo.com
Brian Gallagher		bgallagher100@comcast.net
Prof. James Marks	Penn State University	jmarks@hmc.psu.edu
Rob Ashley		rashley@ashleybiopharm.com

Interrogatory No.3:
Identify all persons having knowledge of the allegations and facts that you asserted in response to these interrogatories, and describe the substance of those persons' knowledge.

Response to Interrogatory No. 3:
At this time, these persons and knowledge are:

Jeff Day, Rob Ashley, Chris Powala, Frank Ruffo, Nancy Broadbent, Paul Lubetkin, Colin Stewart have knowledge of the early interactions between Sköld and Collagenex.
Greg Ford has knowledge of transfers of RESTORADERM labeled materials from Sköld to Collagenex.

Mats Silvander has knowledge on the conception of the RESTORADERM mark, and its affiliation with the RESTORADERM Technology.

The parties affiliated with dermatology companies with whom Sköld has worked most closely in marketing RESTORADERM Technology shall be found in the a "Recollections of Promotional Meetings Document" that will be provided with the First Updated Initial Disclosures. The Recollections of Recollections of Promotional Meetings Document lists the current best recollection of such meetings. Since the Recollections of Promotional Meetings Document addresses more than just this request, and since the document includes highly confidential information, one **Confidential** version will be provided in edited form (e.g., listing "Company A"), and another will be provided in a separate envelope labeled Petitioner Answers to

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Interrogatories, **Trade Secret/Commercially Sensitive**, which will identify the edited information (e.g., "Alpha Technology Co. (Company A)"). This Recollections of Promotional Meetings Document sets forth Petitioner's current recollection of such meetings or presentations, and may be updated.

The individuals listed in the Recollections of Promotional Meetings Document would have knowledge of information made clear from the context in the Recollections of Promotional Meetings Document.

The individuals identified in any of the documents provided with the updated or original Initial Disclosures would have knowledge of information made clear from the context of these documents.

Petitioner has the following contact information:

Greg Ford	gford@Akrimax.com
Chris Powalla	cpowala@vicepttx.com

Interrogatory No.4:
Describe in detail how the term RESTORADERM was first conceived of.

Response to Interrogatory No. 4:
At an early stage of development Sköld and Mats Silvander were brainstorming about giving the development a name and came up with Lipoid, LipoDerm, Restoraderm for use with various aspects of technology under consideration. The idea was to use Restoraderm for topical delivery and Lipoid for nasal/oral delivery. Lately the nasal and oral system goes under the trademark LipoGrid Technology.

The topical technology labeled with the Lipoderm and RESTORADERM marks was presented to Collagenex on Sept 11th 2001, especially via a document substantially identical to that labeled "A theory of the "mode of action" concerning this new technology" ("Mode of Action Document"). In early 2002 Collagenex had a couple of sessions internally (Jeff Day, Rob Ashley and Chris Powala) to decide which the Sköld's trademarks they were comfortable with and settled on Restoraderm. Collagenex then asked if Sköld was fine with that choice, and he gave them approval (contingent on the license), which led to the license provided by the 2002 Agreement. Since then the mark has been associated with RESTORADERM Technology, though since 2010 there has been the confusion brought on by Registrant's unlicensed and misleading use of the mark.

The Mode of Action Document is being provided with the First Updated Initial Disclosures.

Interrogatory No.5:
Describe each product of which Petitioner is aware that has been marketed under the mark RESTORADERM.

Response to Interrogatory No. 5:
RESTORADERM Technology, when Registrant rightfully licensed it and otherwise, has been

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related to a developmental product subject to regulation. Registrant's licensed use in commerce involved, it is believed, transfers of samples for experimentation, and not general marketing. Similarly, has Sköld's usage involved transfers of samples for experimentation, and not marketing in a larger sense. In contrast, Registrant's unauthorized use of the mark RESTORADERM in recent months has covered an unregulated product that has been marketed to the general public.

In late 2001, prior to any usage or conception of usage by Registrant, Petitioner delivered to Collagenex RESTORADERM labeled samples of a base formulation for RESTORADERM Technology.

Enclosed herewith, provided in a separate envelope labeled Petitioner Answers to Interrogatories, **Trade Secret/Commercially Sensitive**, is a tabulation of products in which Sköld has participated in development. The tabulation is titled "RESTORADERM Technology Projects and Products Worked on by Sköld Since 2001." A redacted **Confidential** version is also provided.

Sköld is aware of the material marketed as Cetaphil Restoraderm.

Interrogatory No.6:
State the date of, and describe in detail the circumstances of, your first use of the mark RESTORADERM in commerce in connection with the sale, offering for sale, distribution, or advertising of a dermatology product.

Response to Interrogatory No. 6:
The week of Sept. 11, 2001, Sköld had scheduled meetings with Neutragena (Ortho McNeil), Medicis and Alerga, each of which had received from Sköld the Mode of Action Document. Each of these was a set up as part of selling RESTORADERM Technology product and services.

In late 2001, prior to any usage or conception of usage by Registrant, Petitioner delivered to Collagenex RESTORADERM labeled samples of a base formulation for RESTORADERM Technology.

Petitioner's meeting with Collagenex is set forth in the answer to Interrogatory No. 4.

Moreover, in November or December of 2001, samples labeled "RESTORADERM Technology" were delivered to Collagenex.

Interrogatory No.7:
State the date of, and describe in detail the circumstances of, your first use of the mark RESTORADERM in commerce in connection with the sale, offering for sale, distribution, or advertising of consulting services for a dermatology product.

Response to Interrogatory No. 7:
This Interrogatory is answered by the answers to Interrogatory Nos. 4 through 6, which responses are incorporated herein.

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Interrogatory No.8:
Describe in detail all facts and identify all documents and things showing Petitioner's continuous use of the term RESTORADERM as a trademark in commerce since prior to February 11, 2002, and between then and February 28, 2002.

Response to Interrogatory No. 8:
Sköld initial activities are described in the answers to Interrogatory Nos. 4 through 6, which responses are incorporated herein.

Since Registrant was a licensee of the mark, all its usages inure to Petitioner's benefit. As such, Registrant has control of most of this information, such that requiring Petitioner to piece it together constitutes an undue burden. Petitioner objects thus for the request being overbroad and overly burdensome, but will endeavor to provide a response to the fair scope of the Interrogatory.

Petitioner notes that since Registrant had substantial control of activity until November 29, 2009, any fatal discontinuity in use in this period would be a fatal discontinuity working against Registrant and separately mitigating for cancellation.

Throughout the period from 11 Feb 2002 to 29 Nov 2009 (the "Sköld Benefit Period"), Collagenex's and Galderma's uses were Sköld's uses.

In addition to licensed activity of Registrant during the Sköld Benefit Period, Sköld was producing the RESTORADERM Technology samples used by Registrant, and sending them to Registrant for use in non-human testing. Until sometime in 2004, all samples for human use were made by Apoteket AB under contract with Sköld, and under Sköld's supervision. Thereafter, such samples were made by Apoteket AB under contract with Collagenex, but under under Sköld's supervision.

During the Sköld Benefit Period, RESTORADERM Technology was presented to potential collaborators with Sköld presented as the innovator and provider of RESTORADERM Technology services. During the Sköld Benefit Period, RESTORADERM Technology was presented to scientific meetings with Sköld presented as the innovator and provider of RESTORADERM Technology services. The Recollections of Promotional Meetings Document lists the current best recollection of such meetings.

During the Sköld Benefit Period, Sköld was paid [redacted]k/quarter from early 2002 through about Aug 2004 (~(9 + 2/3) x [redacted]k = [redacted]), and thereafter to about early 2007, $43.75k/quarter (~(10 + 1/3) x [redacted] = $[redacted]). These payments were for consulting services.

During the Sköld Benefit Period, Sköld was paid about $[redacted] in milestone or milestone-like payments under the 2002 Agreement, and about $[redacted] in milestone or milestone-like payments under the 2004 Agreement. The 2004 Agreement contemplated substantially greater milestone or milestone-like payments.

During the Sköld Benefit Period, Sköld was paid about $4[redacted] in 2003 by EpiTan Limited for

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the costs of the feasibility study contemplated by the three-way agreement between Sköld, EpiTan and Collagenex dated May 9, 2003. This agreement is provided in the First Updated Initial Disclosures.

The Recollections of Promotional Meetings Document also addresses the post-Sköld Benefit Period.

A presentation substantially like that of Exhibit 12 to the Amended Petition for Cancellation ("Amended Petition") is believed to have been presented at many of the meetings of the Recollections of Promotional Meetings Document.

All found documents relating hereto are either (a) provided by and identified in the First Updated Initial Disclosures, and in the Amended Petition or (b) provided in the documents to be made available in the Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things, the product of the reasonably formulated searches described in such Response. To the extent that Registrant seeks further identification of these documents, Petitioner objects on the grounds that the request is overbroad and overly burdensome.

Interrogatory No.9:
Describe all facts and identify all documents and things relating to and showing Petitioner's current use of the mark RESTORADERM in connection with any good or service.

Response to Interrogatory No. 9:
This Interrogatory is answered by the answer to Interrogatory No. 8, which response is incorporated herein.

All found documents relating hereto are either (a) provided by and identified in the First Updated Initial Disclosures, and in the Amended Petition or (b) provided in the documents to be made available in the Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things, the product of the reasonably formulated searches described in such Response. To the extent that Registrant seeks further identification of these documents, Petitioner objects on the grounds that the request is overbroad and overly burdensome

Interrogatory No. 10:
Describe all facts and identify all documents and things relating to and showing Petitioner's use of the mark RESTORADERM in commerce following the termination of the 2004 Agreement on or about November 27,2009.

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Response to Interrogatory No. 10:
This Interrogatory is answered by the answer to Interrogatory No. 8, which response is incorporated herein.

All found documents relating hereto are either (a) provided by and identified in the First Updated Initial Disclosures, and in the Amended Petition or (b) provided in the documents to be made available in the Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things, the product of the reasonably formulated searches described in such Response. To the extent that Registrant seeks further identification of these documents, Petitioner objects on the grounds that the request is overbroad and overly burdensome.

Interrogatory No. 11:
Identify all instances of use by Petitioner of the term RESTORADERM, including use in marketing materials, internal materials and Petitioner's websites.

Response to Interrogatory No. 11:
This Interrogatory is answered by the answer to Interrogatory No. 8, which response is incorporated herein.

To the extent that Registrant seeks a more thorough examination of Petitioner's records than is outlined in Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things (filed concurrently herewith), Petitioner objects on the grounds that the request is overbroad and overly burdensome.

Interrogatory No. 12:
Describe all of the ways in which Petitioner markets himself and his goods and services.

Response to Interrogatory No. 12:
This Interrogatory is answered by the answer to Interrogatory No. 8, which response is incorporated herein.

Interrogatory No. 13:
Describe Petitioner's plans to expand Petitioner's goods and/or services offered under the term RESTORADERM beyond the scope of that which Petitioner currently offers.

Response to Interrogatory No. 13:
There are no current plans to expand. Petitioner currently endeavors to develop partnership(s) on multiple products embodying RESTORADERM Technology.

Interrogatory No. 14:
State the sum of all payments Collagenex paid to Petitioner pursuant to any agreement between Collagenex and Petitioner.

Response to Interrogatory No. 14:
Petitioner objects to the burden of being asked for information in the most detailed control of Registrant, such that the request is overbroad and overly burdensome. Petitioner objects for this

reason, but will endeavor to provide a response to the fair scope of the Interrogatory.

A 12 Feb 2008 letter from Collagenex (Exhibit 4, Amended Petition) asserts that Sköld have received over $ 2.5M in payments from Collagenex. Petitioner's response to the reasonable scope of this Interrogatory is provided by his answer to Interrogatory 8, which response is incorporated herein.

Interrogatory No. 15:
State Petitioner's total revenue generated by the sale of Petitioner's goods displaying the term RESTORADERM by year for the past ten years.

Response to Interrogatory No. 15:
Petitioner objects to the burden of being asked for information in the most detailed control of Registrant, such that the request is overbroad and overly burdensome. Petitioner objects for this reason, but will endeavor to provide a response to the fair scope of the Interrogatory.

Petitioner's revenue is set forth in his answer to Interrogatory 8, which response is incorporated herein.

Interrogatory No. 16:
State Petitioner's total revenue by year for each year since Petitioner began using the term RESTORADERM as a trademark in commerce.

Response to Interrogatory No. 16:
Petitioner objects to the burden of being asked for information in the most detailed control of Registrant, such that the request is overbroad and overly burdensome. Petitioner objects for this reason, but will endeavor to provide a response to the fair scope of the Interrogatory.

Petitioner's revenue is set forth in his answer to Interrogatory 8, which set forth revenue for which the yearly totals are available to Registrant, and which response is incorporated herein.

Interrogatory No. 17:
State whether any searches, inquiries, investigations, or marketing surveys have been or are being conducted relating to an alleged association between Petitioner and the term RESTORADERM.

Response to Interrogatory No. 17:
No formal such studies have been conducted. Petitioner regularly attends scientific dermatology meetings and is aware from these interactions with the dermatology community and other extensive interactions with the scientific dermatology community that RESTORADERM is associated in this community with Petitioner, and in particular the RESTORADERM Technology is associated with Petitioner.

Interrogatory No. 18:
Describe in detail all facts and identify all documents and things relating to an alleged association between Petitioner and the term RESTORADERM.

Response to Interrogatory No. 18:
Sköld is the inventor of the RESTORADERM Technology and has been promoting the technology since 2001 through widespread contacts with the dermatology community. The Recollections of Promotional Meetings Document provides an indication of the scope of these contacts.

The First Updated Initial Disclosures include two emails on confusion, and hence on the association between Petitioner and the term RESTORADERM

All found documents relating hereto are either (a) provided by and identified in the updated Initial Disclosures, and in the Amended Petition or (b) provided in the documents to be made available in the Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things, the product of the reasonably formulated searches described in such Response. To the extent that Registrant seeks further identification of these documents, Petitioner objects on the grounds that the request is overbroad and overly burdensome.

Interrogatory No. 19:
State the date of, and describe in detail the circumstances of, when you first became aware of Registrant's filing of either of the U.S. trademark applications for RESTORADERM, which applications matured into U.S. Reg. Nos. 3,394,514 and 2,985,751.

Response to Interrogatory No. 19:
Petitioner was aware of the first filing in 2002, probably on a date close to the date of filing, since Collagenex asked Sköld's permission to make the filing and otherwise kept him apprised of the filing.

Petitioner learned of the 2007 filing in about April or May of 2010, in connection with preparing his own trademark filings. If an earlier notification was given to Petitioner, he does not recall it. A review of the papers examined in connection with this proceeding finds that the February 2008 letter from Andrew Powell that is Exhibit 4 to the Amended Petition mentions "[a]nother Restoraderm™ trademark for *non-medicated skin care preparations*."

Interrogatory No. 20:
Describe in detail all facts and identify all documents and things relating to Registrant's alleged abandonment of its plans to use Registrant's Mark in connection with a therapeutic skin care preparation and/or its alleged failure to use Registrant's Mark in connection with a therapeutic skin care preparation for more than three years.

Response to Interrogatory No. 20:
It is Petitioner's contention, which he finds difficult to rebut, that a "therapeutic" or a "treatment" cannot be marketed in the United States without a the filing and approval of a New Drug Application ("NDA") under the Food and Drug Act, as amended from time to time, or pursuant to a comparable regulatory application or historic safe harbor. It is Petitioner's further contention the goods Registrant sell under the Cetaphil Restoraderm mark cannot be both a "therapeutic" (per Reg. No. 2985751) and "non-medicated" (per Reg. No. 3394514). The MPEP notes at

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1402.03 that "a skin lotion that is medicated should be classified in Class 5, and the identification should indicate that the product is medicated in order to justify its classification in Class 5 rather than in the more commonly understood and assigned Class 3."

In other words, if a product is therapeutic, then its general marketing in the United States must be pursuant to an approved NDA or comparable regulatory approval (or one of a few explicit and very limited exceptions), and if so approved, it is medicated under the Food and Drug Act. Registrant is directed to Food and Drug Administration's Import Alerts #66-38 and #54-07, or the letter published at p.21 of August 2008 issue of Pharmacy Today, for information on the regulatory status of therapeutic claims not supported by an approved NDA. If Petitioner's lead premise is correct, as appears incontestable, then Petitioner would have expected to have heard through his contacts in the dermatology community that Registrant was making steps towards obtaining an approval of an Investigational Drug Application or an NDA. It is this lack of indicia from the dermatology community, the filing of the application for the '514 Registration, and Greg Ford's November 2007 announcement of a lack of interest in RESTORADERM Technology that has led Petitioner to conclude that more likely than not Registrant abandoned the '751 Registration in 2007.

The relevant question is whether Registrant can be maintaining a mark for goods that are THERAPEUTIC SKIN CARE PREPARATIONS and TREATMENT OF SKIN DISORDERS if its sales materials quite clearly do not say that the material is *therapeutic* or that it provides a *treatment*. Petitioner's review of Registrant's sales materials finds no such assertions. The specimen's submitted with Registrant's recent Declaration of Use in connection with the '751 Registration comprise evidence for abandonment. Similarly, Registrant's cetaphil.com/products/restoraderm-moisturizer website, as screen captured on 24 Feb 2012, provides evidence of abandonment.

All found documents relating hereto are either (a) provided by and identified in the First Updated Initial Disclosures, and in the Amended Petition or (b) provided in the documents to be made available in the Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things, the product of the reasonably formulated searches described in such Response, or (c) publicly available (for the citations of the second paragraph of this response). To the extent that Registrant seeks further identification of these documents, Petitioner objects on the grounds that the request is overbroad and overly burdensome.

Interrogatory No. 21:
Describe in detail all facts and identify all documents and things relating to Registrant's alleged abandonment of its plans to use Registrant's Mark in connection with a treatment for skin disorders and/or its alleged failure to use Registrant's Mark in connection with a treatment for skin disorders for more than three years.

Response to Interrogatory No. 21:
Petitioner's answer to Interrogatory 21 is provided by his answer to Interrogatory 20.

All found documents relating hereto are either (a) provided by and identified in the First Updated Initial Disclosures, and in the Amended Petition or (b) provided in the documents to be made

available in the Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things, the product of the reasonably formulated searches described in such Response, or (c) publicly available (for the citations of the second paragraph of the response to Interrogatory 20). To the extent that Registrant seeks further identification of these documents, Petitioner objects on the grounds that the request is overbroad and overly burdensome.

Interrogatory No. 22:
Describe in detail the legal and factual basis for your contention that the 2002 Agreement granted a license from Petitioner to Collagenex to use the RESTORADERM trademark. In your answer, please cite specific provisions of the 2002 Agreement that support your contention.

Response to Interrogatory No. 22:
Petitioner's legal and factual basis for concluding that the 2002 Agreement grants a mere license to Collagenex to use the RESTORADERM trademark is set forth in detail in the Amended Petition, his Response in Opposition to Motion to Dismiss, and his Brief in Opposition to Motion to Dismiss or Strike, as are the specific provisions of that agreement relied upon.

Interrogatory No. 23:
Explain the meaning of Paragraph 4.2 of the 2002 Agreement.

Response to Interrogatory No. 23:
Petitioner's legal and factual basis for concluding that the 2002 Agreement grants a mere license to Collagenex to use the RESTORADERM trademark is set forth in detail in the Petition, his Response in Opposition to Motion to Dismiss, and his Brief in Opposition to Motion to Dismiss or Strike, as are the specific provisions of that agreement relied upon.

Registrant asserts that this Paragraph 4.2 language is totally inconsistent with a license, but Petitioner has noted with sound legal authority outlined in the cited previous filings that "[w]hether a transfer of a particular right or interest under a patent is an assignment or a license does not depend upon the name by which it calls itself, but upon the legal effect of its provisions." In other words, it is many the license that has spoken in the words of assignment, yet been dependent on the continuing obligations of the "assignee," and hence has clearly been a license. Petitioner would agree that had Registrant paid the full measure of consideration contemplated by the parties, as reflected in the 2002 and 2004 Agreements, the RESTORADERM trademark would have become the exclusive property of Registrant.

Interrogatory No. 24:
Explain why Petitioner entered into the 2002 Agreement.

Response to Interrogatory No. 24:
In September 2001 Sköld traveled to the United States for a number of meetings. On September 11th Sköld had a scheduled meeting with Neutragena/Johnson & Johnson Pharmaceuticals in New Jersey and a flight that same day to Phoenix, Arizona to see Medicis Pharmaceuticals. Sköld arrived at Johnson & Johnson at 8:45 a.m, but we all know what happened a few miles away at the World Trade Center at 8:46 a.m that frightening day. Sköld's meeting with J&J was postponed and he could not travel to his further appointments since air travel was suspended.

Sköld was therefore stranded in New Jersey, where his cell phone did not function. Per Jeff Day's suggestion, Sköld traveled to Newtown, PA, to a Company called Collagenex, to use their conference room and phone to make needed arrangements.

At Collagenex Sköld was welcomed by its then CEO, Brian Gallagher, together with Rob Ashley and Jeff Day. Before Sköld used the phone, the group had a coffee and talked for 30 minutes or so. The group realized that Collagenex might be interested in my work with RESTORADERM Technology and decided that once Sköld was finished making phone calls the group should continue to discuss a potential partnership. Collagenex was not in dermatology at the time but had one product it was considering bringing to the dermatology community. It wanted to build a range of topical products around this acne product. Since it was that particular awful and emotional day, the group became close to each other with surprising rapidity.

To find an extra measure of meaning in that day, Sköld decided early in those meetings to go to lengths to work with the Collagenex people. During many phone calls with Jeff Day and Rob Ashley thereafter and around the Caribbean meeting on Puerto Rico in January 2002 (where Sköld was attending) Sköld and Collagenex started to negotiate an agreement that eventually (and rapidly) closed in February 2002, as the 2002 Agreement (as identified in the Registrant's First Set of Interrogatories).

Dermatologists with whom Sköld had been working with for some years at that time became a core part of Collagenex scientific board, and Sköld and these dermatologists all worked closely for a number of years putting Collagenex on the dermatology map in the US.

In short, Petitioner entered into the 2002 Agreement because he had established a good relationship with the principles of Collagenex, and because the terms of the agreement, including his understanding of a contingent licensing of the mark RESTORADERM, were satisfactory to him.

Interrogatory No. 25:
Describe in detail the legal and factual basis for your contention that the 2002 Agreement did not vest exclusive rights in and to the trademark RESTORADERM to Collagenex. In your answer, please cite specific provisions of the 2002 Agreement that support your contention.

Response to Interrogatory No. 25:
Asked and answered with respect to Interrogatory No. 23, which response is incorporated herein.

Interrogatory No. 26:
Describe in detail the legal and factual basis for your contention that the 2004 Agreement in any way affected right, title, or interest in and to Registrant's Mark. In your answer, please cite specific provisions of the 2004 Agreement that support your contention.

Response to Interrogatory No. 26:
The legal and factual basis for this contention is set forth in the requested detail in the Petition. Specific provisions as requested are set forth in the Petitioner's Petition, his Response in Opposition to Motion to Dismiss, and his Brief in Opposition to Motion to Dismiss or Strike.

Interrogatory No. 27:
Describe in detail the legal and factual basis for your assertion that the goods Registrant currently offers under Registrant's Mark cannot be described accurately as "therapeutic skin care preparations" or "treatments for skin disorders."

Response to Interrogatory No. 27:
Petitioner's answer to this Interrogatory is set for in his answer to Interrogatory No. 20, which response is incorporated herein.

Interrogatory No. 28:
Describe in detail the legal and factual basis for your contention that the goods with which Registrant used Registrant's Mark in or about May 2005 and the goods with which Registrant uses Registrant's Mark currently are dissimilar.

Response to Interrogatory No. 28:
As outlined as item #9 in the Amended Petition, and further set forth in the general comments above, Petitioner's RESTORADERM Technology is based on having components (a) and (b).

Petitioner's understanding is that the product labeled Cetaphil Restoraderm contains water, glycerin, caprylic/capric triglyceride, Helianthus annuus (sunflower) seed oil, pentylene glycol, Butyrospermum parkii (shea butter), sorbitol, cyclopentasiloxane, cetearyl alcohol, behenyl alcohol, glyceryl stearate, tocopheryl acetate, hydroxypalmitoyl sphinganine, niacinamide, allantoin, panthenol, arginine, disodium ethylene dicocamide PEG-15 disulfate, glyceryl stearate citrate, sodium PCA, ceteareth-20, sodium polyacrylate, caprylyl glycol, citric acid, dimethiconol, disodium EDTA, sodium hyaluronate, cetyl alcohol. The singly underlined components are various forms of triglyceride (fat); these are chemically formed from fatty acids by dehydration reactions, but are not fatty acids. There is no acid function left after the dehydration reactions. There are other conjugates formed with fatty acids, but these are not fatty acids. There are fatty alcohols, but these are not fatty acids. Nothing else is believed to be a fatty acid, nor a phospholipid, nor cholesterol. There is apparently a ceramide in the Cetaphil Restoraderm product, as indicated by the double underline.

The above composition for the Cetaphil Restoraderm product is not believed to be compatible with the presence of different macromolecular aggregates formed of the (a) lipids. Among other things, cholesterol and sufficient amounts of phospholipid-like materials are believed to be necessary to form the different macromolecular aggregates.

Interrogatory No. 29:
Describe in detail all facts and identify all documents and things showing or relating to communications and correspondence Petitioner has received from individuals in the U.S. making inquiries about whether RESTORADERM refers to a lipid composition or a dermatological salve.

Response to Interrogatory No. 29:
Petitioner does not understand the question, or its relevance. The request is vague and

ambiguous. Accordingly, Petitioner objects to its insoluble lack of clarity. No more detailed response can be made absent further clarification.

All found documents relating hereto are either (a) provided by and identified in the First Updated Initial Disclosures, and in the Amended Petition or (b) provided in the documents to be made available in the Petitioner Sköld's Response to Registrant's First Request for Production of Documents and Things, the product of the reasonably formulated searches described in such Response. To the extent that Registrant seeks further identification of these documents, Petitioner objects on the grounds that the request is overbroad and overly burdensome.

Interrogatory No. 30:
Identify all domain names registered by or on behalf of Petitioner that incorporate the term RESTORADERM.

Response to Interrogatory No. 30:
None at this time.

Interrogatory No. 31:
Identify any members of the public known to Petitioner to have been or who may have been confused with respect to Registrant's Mark as a result of, or with respect to, the use by Petitioner of the mark RESTORADERM; and:
(a) Describe each such instance of confusion; and
(b) Identify any persons who can testify regarding each such instance.

Response to Interrogatory No. 31:
RESTORADERM Technology is not currently directed to the public, but to researchers, physicians and colleagues in the pharmaceutical business. Evidence of confusion shall be provided by Petitioner's testimony of his interactions with such researchers, physicians and colleagues.

Instances of confusion are documented in the First Updated Initial Disclosures. The request to describe each instance is request is overbroad, and unduly burdensome, and objected-to on that basis.

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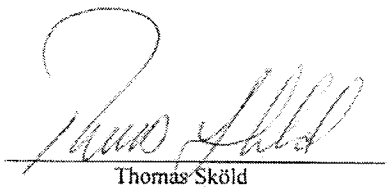
VERIFICATION

Thomas Sköld, acknowledging that this verification is made under penalty of perjury, states that he has read the foregoing Petitioner Sköld's Response to Registrant's First Set of Interrogatories, and that to the best of his knowledge, information and belief, the facts set forth therein are true and correct.

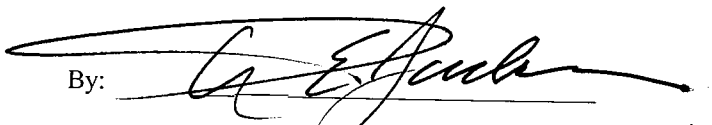
DATED: March 15, 2012



Thomas Sköld

Respectfully submitted,

Date: March 15, 2012

By: 

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(732) 935-7122
Attorney for Petitioner

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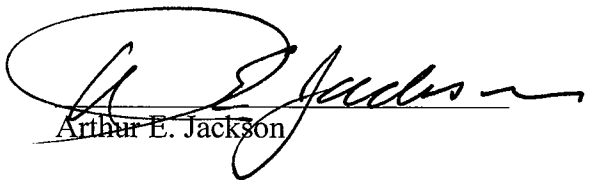
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Petitioner Sköld's Response to Registrant's First Set of Interrogatories, along with the cover letter for the First Updated Initial Disclosures (enclosures by mail), was sent by email on this 15th of March, 2012 to:

Jeff.Becker@haynesboone.com



Arthur E. Jackson

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Sköld Brief Exhibit 3
(Sköld's Supplemental Response to Registrant's 1st Set of Interrogatories)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

PETITIONER SKÖLD'S SUPPLEMENTAL RESPONSE TO REGISTRANT'S FIRST SET OF INTERROGATORIES

Pursuant to Rules 26 and 33 of the Federal Rules of Civil Procedure, Petitioner Thomas Sköld ("Sköld"), by and through its undersigned counsel, submits this response to the Registrant's First Set of Interrogatories as set forth below.

As a general note, applicable to multiple Interrogatories, Petitioner's RESTORADERM Technology is based on (a) compositions of stratum corneum lipids (phospholipids/ceramide/ cholesterol/fatty acid), and (b) the presence of different macromolecular aggregates formed of the lipids. Its primary intent is for formulation for delivering pharmaceutically active substances into or through the dermis of a patient. But Sköld's use of the trademark has extended to the vehicle. References herein to the "RESTORADERM Technology" are references to technology encompassing (a) and (b).

As a general note, the responses below may speak of "Registrant," where the context should make clear whether the referenced party was, at the time of events recited, Galderma Laboratories, Inc. ("Galderma") or its predecessor in interest, Collagenex Pharmaceuticals, Inc. ("Collagenex"). At other times, the specific such party may be called out.

Interrogatory No.4:
Describe in detail how the term RESTORADERM was first conceived of.

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Response to Interrogatory No. 4:
At an early stage of development Sköld and Mats Silvander were brainstorming about giving the development a name and came up with Lipoid, LipoDerm, Restoraderm for use with various aspects of technology under consideration. The idea was to use Restoraderm for topical delivery and Lipoid for nasal/oral delivery. Lately the nasal and oral system goes under the trademark LipoGrid Technology.

The topical technology labeled with the Lipoderm and RESTORADERM marks was presented to Collagenex on Sept. **12th** ~~11th~~ 2001, especially via a document substantially identical to that labeled "A theory of the "mode of action" concerning this new technology" ("Mode of Action Document"**, Bates SKOLD-000011**). In early 2002 Collagenex had a couple of sessions internally (Jeff Day, Rob Ashley and Chris Powala) to decide which the Sköld's trademarks they were comfortable with and settled on Restoraderm. Collagenex then asked if Sköld was fine with that choice, and he gave them approval (contingent on the license), which led to the license provided by the 2002 Agreement. Since then the mark has been associated with RESTORADERM Technology, though since 2010 there has been the confusion brought on by Registrant's unlicensed and misleading use of the mark.

The Mode of Action Document is being provided with the First Updated Initial Disclosures.

Interrogatory No.6:
State the date of, and describe in detail the circumstances of, your first use of the mark RESTORADERM in commerce in connection with the sale, offering for sale, distribution, or advertising of a dermatology product.

Response to Interrogatory No. 6:
The week of Sept. 11, 2001, Sköld had scheduled meetings with **Neutrogena** ~~Neutragen~~ (Ortho McNeil), Medicis and **Allergan** ~~Alerga~~ , ~~each of which~~ **at least the first two of whom** had received from Sköld the Mode of Action Document. Each of these was a set up as part of selling RESTORADERM Technology product and services.

In late 2001, prior to any usage or conception of usage by Registrant, Petitioner delivered to Collagenex RESTORADERM labeled samples of a base formulation for RESTORADERM Technology.

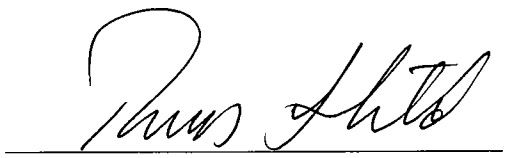
Petitioner's meeting with Collagenex is set forth in the answer to Interrogatory No. 4.

Moreover, in November **and** ~~or~~ December of 2001, samples labeled "RESTORADERM Technology" were delivered to Collagenex.

VERIFICATION

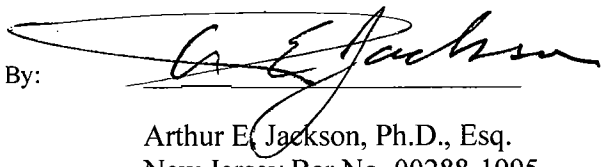
Thomas Sköld, acknowledging that this verification is made under penalty of perjury, states that he has read the foregoing Petitioner Sköld's Supplemental Response to Registrant's First Set of Interrogatories, and that to the best of his knowledge, information and belief, the facts set forth therein are true and correct.

DATED: May 14, 2013



Thomas Sköld

Respectfully submitted,

Date: May 15, 2013 By: 

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(732) 935-7122
Attorney for Petitioner

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Petitioner Sköld's Supplemental Response to Registrant's First Set of Interrogatories was sent by email on this @@ of May, 2013 to:

Jeff.Becker@haynesboone.com

Arthur E. Jackson

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Sköld Brief Exhibit 4
(Declaration of Sköld, and Exhibits A through E thereto)

PUBLIC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

DECLARATION OF THOMAS SKÖLD

I, Thomas Sköld, declare as follows:

1. I am the Petitioner in this Cancellation proceeding.
2. I am over the age of eighteen (18) and am competent to make this declaration.
3. I have personal knowledge of the matters which are the subject of this declaration.
4. I first met with Collagenex Pharmaceuticals, Inc., Registrant's predecessor in interest, at its Newton, Pennsylvania location on 12 September 2001, the day after the memorable day of 11 September 2001. In the meeting, I presented the Restoraderm technology, my services in developing specific formulations thereof, and my availability to provide specific formulations within the technology, for example formulations carrying specific drugs. At the meeting, I showed Collagenex a document substantially the same as, if not identical to, that attached hereto as Sköld Decl. Exhibit E. That document shown to shown to Collagenex included the recitation of "Restoraderm" Technology found in Sköld Decl. Exhibit E. Thereafter I

worked collaboratively with Collagenex to develop a product that was termed "Restoraderm" until at least November 2007.

5. The 12 September 2001 meeting came about because an 11 September 2001 meeting with Johnson & Johnson/Neutrogena/Ortho Derm (related companies, treated here as one) to sell Restoraderm technology was cancelled mid-meeting, due to the tragic events of that day. I also had later September 2001 meetings scheduled with Medicis (scheduled 12 September 2001 in Arizona) and Allergan (California) to sell the technology. Because of the post 11 September 2001 travel restrictions and because I was soon in intense negotiations with Collagenex, the Medicis meeting converted to a conference call and the Allergan meeting was cancelled. Johnson & Johnson/Neutrogena/Ortho Derm and Medicis all received for their scheduled September 2001 meetings with Sköld a copy of a document substantially the same as, if not identical to, that attached hereto as Sköld Decl. Exhibit E. In September, 2001 I used, with Allergan, the mark "Restoraderm" in connection with the technology.
6. In November and December of 2001 I transported samples of a skin-care formulation labeled "Restoraderm" to Collagenex from Sweden. Multiple shipments reflected improvement in the formulation as manufactured in Sweden. Some of the samples were transported from Sweden by myself, and some I had mailed to Jeffrey S. Day. I further hand delivered such samples to Collagenex at the Caribbean Derm. meeting in Puerto Rico, which meeting occurred on or about 18 January 2002. All

the samples from 2001 and 2002 were formulated in Sweden, under my direction, by myself and my assistant, Mats Silvander.

7. Primary participants of the 12 September 2001 meeting were myself, the Brian M. Gallagher, president of Collagenex, Robert A. Ashley, senior vice president, Commercial Development, of Collagenix, and Jeffrey S. Day (soon to be vice president, dermatology, of Collagenix). These officers remained together at Collagenex through at least about mid-2004. Jeffrey S. Day officially began at Collagenex soon after the 12 September 2001 meeting, but was in attendance at that meeting.
8. Prior to the 12 September 2001 meeting, I had been the CEO of Ponsus AB, a Swedish dermatology products company, from approximately 1995 to August, 2001. Ponsus is a dermatology company that developed, and developed during my tenure as CEO, new dermatology products. Accordingly, I am familiar with the norms of the dermatology industry, and the dermatology product development industry.
9. The services and product I was selling at the 12 September 2001 meeting were for formulation of new dermatology products in the new vehicle I invented, which vehicle is now the subject U.S. Pat. No. 8,029,810. This type of service is to be sold on an exclusive or a well-defined exclusive field-of-use basis, or would be without substantial value. Accordingly, it is normal in the industry that selling of the services is to a limited number of entities. It is normal that limited samples are provided (if at all) in selling presentations.

10. The presentations made to Collagenex in connection with Restoraderm beginning 12 September 2001 and prior to 28 February 2012 were sufficient to generate, prior to early 2007, $814,580 in consulting fees from Collagenex to me, and in this same period, $1,625,000 (USD) in milestone or milestone-like payments from Collagenex to me. Thus, these efforts obtained $2,439,580 in payments from Collagenex to me, indicating that my selling efforts were not token, nor made merely to reserve the mark. The agreements that flowed from these presentations contemplated further payments in excess of two million dollars U.S., which payments were never realized.
11. From the context of my discussions with Collagenex in late 2001 and early 2002, it is clear to me that I would not have gained the 2002 contract with Collagenex if I had not, as I did, send samples to Collagenex in November and December 2001.
12. After execution of the 11 February 2002 Agreement, and before 28 February 2001, I and an assistant, Mats Silvander, manufactured Restoraderm formulation on behalf of Collagenex in Sweden.
13. In the late 2001, early 2002 time frame, the number of financially credible dermatology development companies in the United States was limited. My recollection, refreshed by reviewing the January 2002 Caribbean Derm Meeting program, is that the following were the significant players:

    1, Johnson &Johnson, Neutrogena, Ortho Derm (related, treated as one);
    2, Novartis Pharmaceuticals;
    3, Medicis;
    4, Allergan;
    5, Galderma;
    6, Fujisawa;
    7. Ferndale Laboratories;

8, Stiefel; and
9. Connetics;

14. At the time, Collagenex was just emerging into the group of significantly credible dermatology development companies. At the outside, if I have forgotten any players, or if I was unaware of a few companies that I might have wished to have been aware of, the number of significantly credible dermatology development companies in the United States cannot have exceeded 15 in late 2001 or early 2002.

15. Collagenex's motive for changing of the 2002 Agreement to create the 2004 Agreement were represented to me to be those financial motives outlined in the Sköld Decl. Exhibit D, with one caveat. Later in negotiations, Collagenex's General Counsel, Nancy Broadbent, represented to me that styling the agreement as an acquisition would allow Collagenex to treat its expenses as capital expenses, and not a mere expense. In other words, Collagenex was seeking a more favorable accounting treatment. As represented to me by Collagenex, the substance of the agreement, other tshan the timing of payments, was intended to remain the same.

16. As a private individual, I am the custodian of physical and electronic document copies for my Restoraderm enterprise. As to the documents indicated below, and attached hereto, I testify as follows:

    - Sköld Decl. Exhibit A: 11 February 2012 Cooperation, Development and Licensing Agreement ("2002 Agreement"): This is a true copy of the agreement, as found in my physical files. I received this document from Collagenex soon after its execution by Collagenex and myself. I stored the

document in the ordinary course of business, as I do comparable important business documents.

● Sköld Decl. Exhibit B: Epitan Agreement dated 9 May 2003, SKOLD-000014-35 and SKOLD-001950: This is a true copy of the agreement, as found in my physical files. I received this document from Collagenex soon after its execution by Collagenex and myself. I stored the document in the ordinary course of business, as I do comparable important business documents.

● Sköld Decl. Exhibit C: Collagenex General Counsel's Letter of 12 February 2008, SKOLD-000658-63: This is a true copy of the letter, as found in my my computers as an attachment from my attorneys at Wiggin and Dana. I received this document soon after its receipt by Wiggin and Dana. I stored the document in the ordinary course of business, as I do comparable important business documents.

● Sköld Decl. Exhibit D: Ashley Email dated 9 December 2003, SKOLD-000036: This is a true copy of the email, as found in my computers. I received this document from Collagenex. I stored the document in the ordinary course of business, as I do comparable important business documents.

● Sköld Decl. Exhibit E: SKOLD-000011 (Mode of Action): This is a true copy of the Mode of Action document, as found in my physical files. I personally prepared this document. I stored the document in the ordinary course of business, as I do comparable important business documents.

17. At I declare, under penalty of perjury under the laws of the United States of America and 28 U.S.C. § 1746, that the foregoing is true and correct, and that this declaration was executed this 14th day of May 2013 in New York, New York, United States of America.

Respectfully submitted,

Date: MAY 14TH 2013

By: _____
Thomas Sköld

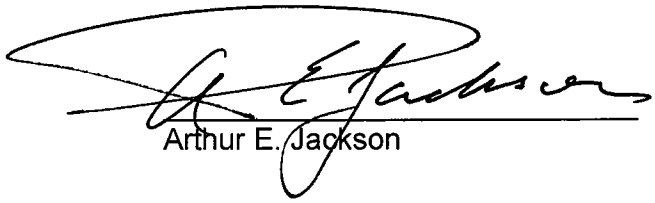
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	Cancellation No. 92052897

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Declaration of Thomas Sköld was sent by email on this 15th of May 2013 to:

Jeff.Becker@haynesboone.com



Arthur E. Jackson

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Sköld Declaration Exhibit A
(2002 Agreement)

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Sköld Declaration Exhibit B
(Epitan Agreement)

PUBLIC

105

CONFIDENTIAL

Final
Date: 9 May 2003

Licence & Feasibility Study Agreement

EPITAN LIMITED (**EpiTan**)

COLLAGENEX PHARMACEUTICALS INCORPORATED (**CollaGenex**)

THOMAS SKÖLD (**Sköld**)

MinterEllison
LAWYERS

RIALTO TOWERS 525 COLLINS STREET, MELBOURNE VIC 3000, DX 204 MELBOURNE
TEL: +61 3 8608 2000 FAX: +61 3 8608 1000

PUBLIC

Sköld Declaration Exhibit C
(Collagenex Letter of 12 Feb. 2008)

PUBLIC

Sköld Declaration Exhibit D
(Ashley Email of 9 December 2003)

PUBLIC

Sköld Declaration Exhibit E
(Mode of Action Document)

PUBLIC

A theory of the "mode of action" concerning this new technology

5 November, 2001

The vehicle is designed in its choice of and share of lipids to resemble the normal lipid organisation of the stratum corneum. Thus the administered vehicle will easily penetrate the lipid bilayer of the skin and in doing so create a temporary and reversible state of enhanced atrophy among the bilayer.
The enhanced atrophy in itself should then give rise to a) enhanced energy levels, said energy could promote active transport of the to-be-carried substances into the skin, and/or b) naturally and reversibly occurring holes and disorganised patches in the lipid bilayer, through which the active substances could then pass more easily.
It is very well feasible that the temporary disarray in the lipid bilayer will temporarily break up the organised structure of the bilayer and create micelles of lipids with areas between them/ surrounding them through which lipophobic/hydrophilic substances and compositions can enter the stratum corneum.
As the content of the vehicle resembles the natural lipid build-up of the skin, the so introduced new lipids will after a short span of creative chaos easily blend in with the natural lipid building stones of the lipid bilayer and thus not permanently damage the skin.

Thomas Sköld

LipoDerm Lipoid Restoraderm Technology

Sköld Brief Exhibit 5
(Registrant's Supplemental Response to Request for Admissions)

PUBLIC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld Petitioner, v. **Galderma Laboratories, Inc.** Registrant.	§ § § § § § § § §	Cancellation No.: 92052897 Mark: RESTORADERM Reg. Nos.: 2,985,751 and 3,394,514

REGISTRANT'S SUPPLEMENTAL RESPONSE TO PETITIONER SKÖLD'S FIRST REQUEST FOR ADMISSIONS

Pursuant to 37 C.F.R. § 2.120, Rules 26 and 33 of the Federal Rules of Civil Procedure, and T.B.M.P. § 405.03(e), Galderma Laboratories, Inc. ("Registrant") herewith supplements its responses to Thomas Sköld's ("Petitioner") Request for Admissions Nos. 1 – 3 ("Request" or "Requests") as follows:

GENERAL OBJECTIONS

1. Registrant objects to any specific Request to the extent that it seeks information subject to (i) the attorney-client privilege, (ii) the attorney work product doctrine, (iii) the protection afforded consulting experts pursuant to Federal Rule of Civil Procedure 26(b)(4)(B), (iv) the self-critical analysis privilege, (v) the investigative privilege, (vi) the party communications privilege, (vii) the witness statement privilege, or (viii) any other privilege or protection afforded by state or federal law. To the extent that a Request can be construed as seeking information subject to such privileges, or any other privilege afforded by law, Registrant hereby claims such privilege and/or invokes the attorney work product doctrine.

2. Registrant expressly reserves the right to amend, supplement, or change its responses to Petitioner's First Requests for Admissions with information learned in the course of further investigation and discovery.

3. The objections listed above are not intended to be exhaustive. Registrant objects to each of the prefatory statements, definitions, and instructions, and Petitioner's Requests to the extent that they impose obligations upon Registrant that exceed those required by the Federal Rules of Civil Procedure, the Federal Rules of Evidence, Title 37 of the Code of Federal Regulations, any order of the Trademark Trial and Appeal Board, or any other applicable law.

Registrant incorporates by reference to each and every Response to Petitioner's Requests herein, the General Objections set forth above.

SUPPLEMENTAL RESPONSES TO REQUESTS FOR ADMISSIONS

Request for Admission No. 1:

Registrant did not use the term Restoraderm in commerce in connection with any product prior to February 28, 2002.

Response:

Subject to and without waiving the general objections, Registrant responds as follows: Admitted.

Request for Admission No. 2:

Registrant did not use the term Restoraderm in commerce in connection with any product prior to February 11, 2002.

Response:

Subject to and without waiving the general objections, Registrant responds as follows: Admitted.

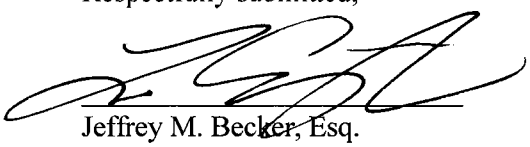
Request for Admission No. 3:

Registrant did not use the term Restoraderm in commerce in connection with any product prior to September 11, 2001.

Response:

Subject to and without waiving the general objections, Registrant responds as follows: Admitted.

Respectfully submitted,



Date: April 24, 2013

Jeffrey M. Becker, Esq.
Lisa N. Congleton, Esq.
Attorneys for Registrant
HAYNES AND BOONE, LLP
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Dallas, Texas 75219
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld Petitioner,	§	Cancellation No.: 92052897
v.	§	Mark: RESTORADERM
Galderma Laboratories, Inc. Registrant.	§	Reg. Nos.: 2,985,751 and 3,394,514

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on this 24th day of April, 2013, the foregoing *Registrant's Supplemental Response to Petitioner Sköld's First Request for Admissions* was served on Petitioner's counsel of record, via email to the following:

Arthur E. Jackson
Moser IP Law Group
artjcksn@gmail.com
docketing@mtiplaw.com

Lisa N. Congleton

Sköld Brief Exhibit 6
(Declaration of Day)

PUBLIC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

DECLARATION OF JEFFREY S. DAY

I, Jeffrey S. Day, declare as follows:

1. I am over the age of eighteen (18) and am competent to make this declaration.
2. I have personal knowledge of the matters which are the subject of this declaration.
3. I have been employed in the pharmaceutical industry, with a particular focus on dermatology, since the late 1980s. Soon after 12 September 2001, Collagenex Pharmaceuticals, Inc. acquired the assets of a dermatology products company that I founded, Rx-Pharma Pharmaceuticals, Inc., and I became vice president, dermatology at Collagenex. remained in that position until about September 2004. Since 2005, I have been a founder and the CEO of Quinnova Pharmaceuticals, Inc. (originally named Princeton Pharmaceuticals), which since December 2010 has been an affiliate of Amneal Enterprises, LLC. Quinnova focuses on dermatology. I have, and in 2001 and 2002 I had, expertise is the dermatology marketplace.
4. I attended a meeting between Thomas Sköld and Collagenex at Collagenex's Newton, Pennsylvania location on or about 12 September 2001, the day after the

memorable day of 11 September 2001. In the meeting, Sköld presented the Restoraderm topical formulation technology, his services in developing specific Restoraderm formulations, and his availability to provide specific formulations within the technology, for example formulations carrying specific drugs. I recall seeing, in connection with that meeting, a document with content substantially the same, if not identical to, that attached hereto as Sköld Decl. Exhibit E (SKÖLD-000011, Mode of Action, associated herewith when I executed this Declaration), and which used the term "Restoraderm" to identify the topical formulation technology.

5. In November and December of 2001 Sköld transported samples of skin-care formulations labeled "Restoraderm" to Collagenex. Some of the samples were transported from Sweden by Sköld, and some were mailed to me from Sweden. Sköld further delivered such samples to me and Collagenex at the Caribean Derm. meeting in Puerto Rico, which meeting occurred on or about 18 January 2002..
6. Primary participants of the 12 September 2001 meeting were Sköld, Brian M. Gallagher, president of Collagenex, Robert A. Ashley, senior vice president, Commercial Development, of Collagenix, and myself. These officers remained together at Collagenex through at least about mid-year 2004.
7. The services and product Sköld was selling at the 12 September 2001 meeting were for formulation of new dermatology products in the new vehicle he invented. This type of service is to be sold on an exclusive or a well-defined exclusive field-of-use basis, or would be without substantial value. Accordingly, it is normal in the industry

that selling of the services is to a limited number of entities. It is normal that limited samples are provided (if at all) in selling presentations.

8. I am familiar with the process that lead to the 2002 Agreement between Sköld and Collagenex, and I am certain that Sköld would not have gained the 2002 contract with Collagenex if he had not, as he did, send samples to Collagenex in November and December 2001.

9. Collagenex's motive for changing of the 2002 Agreement to create the 2004 Agreement were financial motives such as outlined in the Sköld Decl. Exhibit D (Ashley Email dated 9 December 2003, associated herewith when I executed this Declaration). The substance of the agreement, other than the timing of payments, was intended to remain the same.

10. In the late 2001, early 2002 time frame, the number of financially credible dermatology development companies in the United States was limited. My recollection is that the following were the significant players:

    1, Johnson & Johnson, Neutrogena, Ortho Derm (related, treated as one);
    2, Novartis Pharmaceuticals;
    3, Medicis;
    4, Allergan;
    5, Galderma;
    6, Fujisawa;
    7. Ferndale Laboratories;
    8, Stiefel; and
    9. Connetics;

11. At the time, Collagenex was just emerging into the group of significantly credible dermatology development companies. At the outside, if I have forgotten any players,

the number of significantly credible dermatology development companies in the United States cannot have exceeded 15 in late 2001 or early 2002.

12. During the 12 September 2001 meeting, and during all of my subsequent work at Collagenex, the term "Restoraderm" was inextricably connected to the topical formulation technology being developed for Collagenex by Sköld. I am familiar with the negotiations between Sköld and Collagenex, and I am sure that there was no expectation by Collagenex that if it declined to further develop the Restoraderm technology that it could keep title to the Restoraderm trademark.

13. At I declare, under penalty of perjury under the laws of the United States of America and 28 U.S.C. § 1746, that the foregoing is true and correct, and that this declaration was executed this 15th day of May 2013 in New York, New York, United States of America.

Respectfully submitted,

Date: 5/15/13

By: _____
Jeffrey S. Day

Attachments:
Sköld Decl. Exhibit E, SKÖLD-000011, Mode of Action
Sköld Decl. Exhibit D, Ashley Email dated 9 December 2003, SKÖLD-000036

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Declaration of Jeffrey S. Day was sent by email on this 15th of May 2013 to:

Jeff.Becker@haynesboone.com

Arthur E. Jackson

PUBLIC

Sköld Brief Exhibit 7
(Declaration of Jackson)

PUBLIC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

DECLARATION OF ARTHUR E. JACKSON

I, Arthur E. Jackson, declare as follows:

1. I am Counsel at the law firm of Moser Taboada and counsel for Petitioner Thomas Sköld in this Cancellation.
2. I am over the age of eighteen (18) and am competent to make this declaration.
3. I have personal knowledge of the matters which are the subject of this declaration.
4. This declaration is made to authenticate certain documents in support of Petitioner's response to Registrant's Motion for Partial Summary Judgment and confirm certain facts in connection with this Cancellation.
5. Exhibit A hereto is a true and correct copy of a web page obtained at http://business.highbeam.com/industry-reports/equipment/electron-tubes on 10 May 2013, as a first page result of a Google search of "size of the vacuum tube market". The relevance is to assist in distinguishing the cited case law: Westrex Corp. v. New Sensor Corp., 83 U.S.P.Q.2d 1215, 1217 (T.T.A.B. 2007).
6. Exhibit B hereto is a true and correct copy of a web page obtained at http://en.wikipedia.org/wiki/Tube_sound. The relevance is to assist in distinguishing

PUBLIC

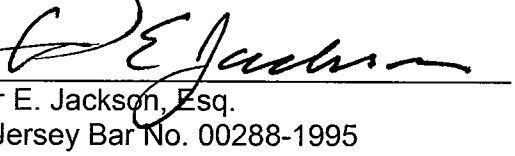
the cited case law: Westrex Corp. v. New Sensor Corp., 83 U.S.P.Q.2d 1215, 1217 (T.T.A.B. 2007).

7. Exhibit C hereto is a true and correct copy of a web page obtained at http://hometheater.about.com/od/vacuumtubeaudio/a/vacuumtubeaudio.htm. The relevance is to assist in distinguishing the cited case law: Westrex Corp. v. New Sensor Corp., 83 U.S.P.Q.2d 1215, 1217 (T.T.A.B. 2007).

I declare, under penalty of perjury under the laws of the United States of America and 28 U.S.C. § 1746, that the foregoing is true and correct, and that this declaration was executed this 15th day of February 2013 in Shrewsbury, New Jersey.

Respectfully submitted,

Date: 15 May 2013

By: 

Arthur E. Jackson, Esq.
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Attorney for Petitioner

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Declaration of Arthur E. Jackson was sent by email on this 15th of May, 2013 to:

Jeff.Becker@haynesboone.com

Arthur E. Jackson

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Jackson Declaration Exhibit A
(Electron Tubes Market Report)

PUBLIC

Electron Tubes

SIC 3671

Companies in this industry

NAICS 334411: Electron Tube Manufacturing

Industry report:

This category covers establishments primarily engaged in manufacturing electron tubes and tube parts. Establishments primarily engaged in manufacturing X-ray tubes and parts are classified in ***SIC 3844: X-Ray Apparatus and Tubes and Related Irradiation Apparatus,*** *those manufacturing liquid crystal displays (LCDs) are classified in* ***SIC 3679: Electronic Components, Not Elsewhere Classified,*** *and those manufacturing computer terminals are classified in* ***SIC 3575: Computer Terminals.***

Industry Snapshot

Approximately 85 companies operated in this industry in 2007, down about 40 percent from the number of firms in the early years of the twenty-first century's first decade. After a period of growth during the late 1990s, the industry was affected by an economic recession, price erosion, and shifting consumer demands. Shipment values in 2008 were $1 billion while $345 million was spent on materials. The industry employed 5,241 in 2007 with 3,145 as production workers who earned $222 million in wages.

In the middle of the first decade of the 2000s, production of new and rebuilt receiving-type electron tubes, including cathode ray tubes (CRT), accounted for just under 75 percent of industry revenue. The other major product group, which accounted for approximately 20 percent of shipment values, consisted of transmittal, industrial, and special-purpose electron tubes (except X-ray tubes). The remainder of shipments consisted of electron tube parts.

According to U.S. Census data, the industry shipped $1.05 billion in electron tubes and tube parts in 2009 followed by $1.2 billion in 2010. Although shipments continued to fall, the total cost of materials increased. In addition, the total cost of materials grew from nearly $485 million in 2009 to over $558 million in 2010. As demand for electron tubes dwindled, so did the industry's workforce, to 4,849 workers in 2009 who earned $261 million in wages. For 2010, the industry employed 4,997 workers, of which 3,913 worked in production with wages that totaled more than $198 million.

According to Paul Gagnon, director of DisplaySearch, "Digital broadcast transitions and more affordable flat panel TVs have caused consumers to replace their TVs, especially CRT models, in record numbers" in April 2011. That trend was going to continue, especially as core components for CRTs were becoming scarce.

Organization and Structure

The two most recognizable types of electron tubes were the ordinary television and computer tube and the once common vacuum tube traditionally used in radios and other electronic equipment. Generally speaking, electron tubes were sealed glass, enamel, or metallic tubes of varying sizes into which electrons were fired for the purpose of displaying images or conducting, transmitting, or multiplying light for non-display purposes. Although television tubes and computer displays were the most common products, industry firms also manufactured camera tubes, microwave tubes, Geiger counters, radar screens, and specialized devices such as electron beam (beta ray) generator tubes, klystron tubes, magnetron tubes, planar triode tubes, and tubes for operating above the X-ray spectrum.

Electron tubes varied according to the extent to which they were "evacuated," or emptied of gases and vapors; by the capability and type of the electron source; and by the number and configuration of electrodes they contained. The amount of power used in electron tubes ranged from milliwatts to hundreds of megawatts, and the frequency of operation ranged between zero and ten-to-the-eleventh-power Hertz depending on the type of tube. In general, CRTs operated by playing a beam of electrons of varying intensities over a display surface such as a phosphor screen, which formed patterns of light that took the form of characters or images. The three basic components of a CRT were the envelope, the electron gun, and the phosphor screen. The electrons were fired through a funnel-shaped element toward the faceplate on the broad end of the envelope that usually was made of glass. The electrons were heated and formed into a beam before being directed through the electron gun to different parts of the screen by the magnetic fields that surrounded the envelope. The phosphor screen consisted of a layer of phosphor dots that coated the inner surface of the CRT's faceplate. Color CRTs used a screen made up of red, green, and blue phosphors, with an electron gun for each color, while monochrome CRT screens employed one electron gun.

In the everyday family "direct view" TV, the face of the picture tube on which the electrons are projected is the same as the screen the viewer sees. In the rear-projection televisions that became increasingly common in the 1980s, images were projected indirectly from three small CRTS (one each for red, green, and blue) through a series of mirrors to a translucent screen. In the mid-1990s, projection TV tube manufacturers used compact CRTs and lenses with shorter focal lengths to reduce the amount of space taken up by the television box, reducing the size of the once bulky rear projection sets by one- third. In contrast to the 4:3 aspect ratio of the standard television tube, wide-screen TVs used a 16:9 ratio that resembled the wide ratio of movie theater screens and that allowed them to be marketed as the precursor to the so-called high-definition television (HDTV) technology trumpeted by Japanese TV makers in the 1990s. Computer CRTs increasingly took advantage of advanced data streaming technology to display downloaded and/or digital video disk (DVD) movies and multimedia entertainment.

Despite its continued popularity in the 1990s, the CRT was by no means a perfect piece of technology. The CRT remained the last holdover of the analog glass vacuum tube in a world increasingly permeated by digital solid state electronics technology. It was bulky, hot, and heavy, used large amounts of power, and was prone to disruptions of glare and magnetic and electrical fields. By the mid-1990s, few experts doubted the days of the CRT were numbered for mainstream computer and TV uses. High definition liquid crystal display (LCD) screens, which used an active matrix view panel, replaced them for computers. Display resolution often surpassed the capabilities of traditional CRT displays. While such technology was often far more expensive, the promise of continually decreasing manufacturing costs and higher consumer demand marked LCD technology as the heir-apparent to traditional CRT use for computer displays.

The second largest industry product group, transmittal, industrial, and special purpose electron tubes, included electro-optical tubes and miscellaneous special-purpose tubes. The electro-optical tube segment included everything from camera tubes and photo cells to other photo-conductive and photo-emissive tubes, most notably the airport bomb detector picture tube, the largest market of the electro-optical tube segment.

Microwave tubes were primarily used in high and ultra-high frequency applications such as radar, telecommunications equipment, military communication and control systems, high-frequency microwave ovens, scientific research equipment, FM radio transmitters, and industrial heating equipment. Traveling wave tubes, which were divided into forward and backward wave electron tubes, accounted for a majority of the microwave electron tubes produced. Microwave tubes comprised a majority of the power and special-purpose tube market. Gas tubes were used primarily in industrial applications because of their efficiency as well as their ability to handle high levels of power or current at generally low frequency levels. Product types included diodes, rectifiers, control-type industrial triodes, hydrogen and non-hydrogen thyratons, and other gas and vapor tubes. High-power tubes were also used in broadcasting transmitters. Vacuum tubes, once the primary element in electrical circuits, were mainly used in applications where low noise and high frequency were involved.

Background and Development

Electron tubes were the principal components of almost all electronic circuits and equipment until semiconductors were developed and began to replace them in the late 1940s and 1950s. The first application of CRT technology was for an oscilloscope in 1897, and the first television using a CRT was developed in the late 1920s. Commercial production of monochrome television picture tubes began in the late 1940s. After World War II, U.S. electron tube manufacturers found a diverse and lucrative market in defense applications, ranging from radar to communication and control equipment.

By the mid-1990s, the fastest-growing segment of the TV picture tube market was big-screen TVs that provided from 31 to 58 inches of viewable screen image. Despite the fact that by the mid-1990s nearly every U.S. home had at least one TV, there were 22.9 million direct-view TVs sold in 1999. In 1994 more than 26 million color TVs were sold in the United States. Spurred on by demand that was projected to reach $20 billion by the turn of the century, industry firms made significant strides in improving the CRT's resolution, brilliance, size, energy usage, and cost. Television tubes and computer monitors became flatter and bigger as the standard 14-inch PC monitor, for example, gave way to 17- and even 20-inch models; digital circuits were used to enhance picture quality; and advances in non-electron tube technology were developed so quickly that the CRT itself seemed destined for only niche uses in specialized applications.

In the 1990s the CRT sector of the electron tube industry continued to establish itself as the sector's primary revenue machine. Despite a drop in government spending for military-related CRT display technologies, the consumer computer CRT and television tube markets provided more than enough demand to fuel the industry's continued growth. Between 1994 and 1999, the value of PC system sales, which included a CRT monitor, grew almost 77 percent. Concurrent expansion occurred in the number of systems sold, which increased over the same period by 121 percent. A total of 90.5 million CRTs were sold in 1998, generating a $17.2 billion market share of the electron tube industry.

In the late 1990s, the battle between the computer CRT and the flat panel display (FPD) intensified. Developed in the United States, but later co-opted by Japanese firms, the FPD encompassed several display technologies, from active and passive matrix LCDs to field emission, micromirror, diamond emission, and neon- or xenon-based gas plasma displays. By the late 1990s, FPD manufacturers had overcome hurdles in FPD design complexity and subsequent high cost and the technology's high power requirements. At one time, the only CRT markets immediately threatened by FPDs were point-of-sale terminals, medical imaging applications, and displays for instrumentation and factory automation. However, at the end of the twentieth century, manufacturers had broken out of the laptop and avionics display markets into the television tube and PC monitor markets that comprised the electron tube's home turf.

FPD technology began to be applied in a wide variety of ways at the end of the 1990s. According to the U.S. Display Consortium, innovative uses included analytical equipment, conference room

equipment, marine instruments, hand-held devices, electronic books, passenger entertainment systems, and home appliances. Cutting-edge technology also included field emission displays (FEDs). According to *Electronic Business,* revenues from flat panel display sales at the end of 1999 were estimated at $11 billion.

Throughout the 1990s, high resolution HDTV was marketed as the next great advance in television technology. Because its superiority was only noticeable in 40-inch screens, the resulting increases in TV tube size spelled more trouble for the electron CRT's future. As the resolution of television screens increased, the brightness of the traditional CRT fell, and the FPD became no more expensive than a comparably sized CRT, but was 75 percent thinner. In addition, the distinction between the television tube and the computer monitor threatened to vanish as technologies like Zenith's "NetVision" allowed consumers to watch TV or surf the World Wide Web from the same screen.

Industry shipments declined from $3.82 billion in 1999 to $3.56 billion in 2000, while the cost of materials increased from $2.08 billion to $2.21 billion. Industry employment declined steadily through the late 1990s and 2000, falling from 21,656 in 1997 to 16,187 in 2000. The number of production workers over this period dropped from 16,774 to 12,718.

The electron tube industry continued to decline during the early years of the first decade of the 2000s in response to the economic recession, price erosion, and shifting consumer demands. Shipment values in 2002 were $2.45 billion, down 24 percent from 2001 and 36 percent from 1998. To limit losses, the industry reduced capital expenditures 75 percent during 2002, from $162 million in 2001 to just $40.1 million in 2002.

By the late 2000s, the future of CRTs was uncertain. The sales of CRT-based computer monitors were slipping. In 2003, U.S. sales of LCD models outpaced CRTs for the first time. Consumer demand, falling prices of LCD models, and computer packaging deals spurred the increased LCD sales. According to research firm iSuppli/Sanford Resources, the average selling price of a 17-inch LCD monitor fell from $915 in 2001 to $271 in 2005. On the other hand, a 17-inch CRT monitor that cost an average of $213 in 2001 sold for approximately $100 in 2005. Responding to consumer demand, computer suppliers like Dell offered aggressive packaging deals that included an LCD monitor.

In 2004, global shipments of LCD monitors overtook CRTs for the first time. According to the Japan Electronics and Information Technology Industries Association, sales of LCD monitors grew 36 percent during 2004, to 67.64 million units, while CRT monitor sales fell 11 percent to 59.64 million units. By the late years of the first decade of the 2000s, LCD monitors claimed as much as 75 percent of the market.

While LCD monitors are quickly outpacing CRT monitors, CRTs continue to hold their own in the television market and are expected to continue to do so until the price for flat panel models falls below $500. In the early years of the first decade of the 2000s, CRT-based television sets accounted for nearly 98 percent of all sales, and in 2005 CRTs continued to hold approximately 85 percent of the market.

Despite the continued strong performance of CRTs in the television sector, the future seems to point toward flat panels. In a December 1, 2003 article in *Popular Science* entitled "CRT, R.I.P.," author Mark Anders noted, "CRTs will probably be around for another decade, but even today the larger a TV is, the less likely it is to be powered by one. Tubes are just too big and heavy. . . . Of course, the CRT won't be completely supplanted until small-scale flat panels (under 19 inches) can compete on price." However, prices were coming down on flat panels as sets that once cost $10,000 cost $2,500 by the mid-years of the first decade of the 2000s and dropped further in the decade's late years to where some could be purchased for less than $1,000.

Nonetheless, CRTs, which can be purchased in comparable size to flat panels for $300, continued to lead in the price wars in the early years of the first decade of the 2000s. In addition, CRT makers were not ready to concede the market to LCDs. Several manufacturers were working on new technology to decrease the size and weight of CRT models, and CRT flat panel technology also is being advanced.

Current Conditions

According to Austin-based market research and consulting firm DisplaySearch, LCD TV shipments totaled 105 million units in 2008, up 33 percent compared to the previous year. More importantly, this marked the first time LCD TV sales surpassed CRT TV sales. One reason demand for LCD TVs was outpacing CRT TVs was consumers were preparing for the upcoming switch from analog to digital television scheduled for June 2009, at which time television broadcasting was going digital. Another reason for the popularity of the LCD TV was that prices were falling 20 to 30 percent or more annually. In fact, The Information Network projected panels for LCD TVs would grow 26.6 percent in 2009. Global CRT TV shipments were projected to decline to 32 million units as demand continued to fade in 2010.

In 2009 global shipments for monitor LCD panels were expected to decline by 17 percent to 144.9 million units, while panels for notebooks were projected to increase by 26.6 percent to 177 million units. According to research firm IDC, the LCD market commanded nearly 97 percent of the total PC monitor market by the second quarter of 2010, which left about three percent market share for the CRT market mainly in the "lower education segment," but was increasingly leaning toward the LCD market. "With just close to 3 percent market share, the CRT is almost dead," Varun Aggarwal noted in *CRN,* in November 2010.

A report released by the Consumer Electronics Association (CEA) titled "Materials Footprint Reduction of Televisions and Computer Monitors: 2004-2010" claimed that flat screen TVs were 75 percent smaller and 82 percent lighter than preceding CRT TVs. As of 2011, there were millions of CRT TVs and monitors in use globally, which means that over the coming years the majority of

recycling will involve these bulkier products. Once CRT-based displays are no longer produced, and most reach the end of their lives to be recycled and disposed of, electronic waste levels should witness a noticeable decline.

Industry Leaders

In the late years of the first decade of the 2000s, LG Display Co. (formerly LG Philips LCD Co.), based in Seoul, South Korea, was the world's leading manufacturer of CRTs. LG Phillips shipped $12.8 billion in products in 2008 to claim approximately one third of the market share. Among the electron tube industry's leading firms during the late years of the first decade of the 2000s was Zenith Electronics Corporation, which had sales of approximately $109 million in 2008. The company was purchased by LG and shifted its focus to research and development. Other major industry players included Hitachi Electronic Devices; Toshiba Westinghouse Electronic; GM Hughes Electronics Corporation; Hewlett-Packard Co.; ITT Corporation; Litton Industries Inc., Electron Devices Division; Philips Electronics North America; and Raytheon Electronic Components.

Research and Technology

The growing demand for computer monitors for use in homes and offices starting in the 1980s forced industry firms to develop more user-friendly monitor designs, such as the "flatsquare CRT," in which the curvature of the CRT's screen was greatly reduced. CRT display technology also continued to evolve in the areas of unit price and color display capabilities.

The application of multifunctional CRT displays in the instrument panels of military aircraft, and, to a lesser degree, commercial aircraft, continued in the 2000s. However, the inherent disadvantages of CRTs, including limited screen size, unwieldy shape, high power requirements, and fragility, led manufacturers to investigate alternatives to CRT technology, such as light-emitting diodes, FPDs, and LCDs. Improvements in LCDs, which were thinner and lighter than CRTs, enabled them to compete in price with CRT-based, large screen video data projectors while offering roughly two to four times their brightness.

Flat panel displays increasingly emerged as the favored display technology, especially in aircraft cockpit applications where limited space and high levels of glare diminished the usefulness of CRTs. Field emission display, another emergent technology that further threatened to unseat the electron CRT, was structurally less complex and thinner in size than LCDs. Field emission displays were based on vacuum microelectronics and combined the advantages of vacuum tube technology with the benefits of digital computer chips. Advances in research and technology also continued in non-CRT product categories in the first decade of the 2000s. Direct broadcast satellites that used electron tubes, such as traveling wave tubes, for non-cable HDTV transmissions, as well as for other uses, were developed for satellite tubes and uplink stations with tube lifetimes of up to 15 years.

To combat the onslaught of the flat panel television industry, some CRT manufacturers were pushing new technology to make CRTs flatter and lighter than their predecessors. A 36-inch CRT television can weigh as much as 200 pounds and is 20 to 24 inches deep. In 2005, LG Phillips Displays and Samsung used new CRT technology to introduce CRT models that were much smaller than their predecessors. Although the models, which were 14 inches deep, were still much bigger than their LCD counterparts, the manufacturers argued that most DVD players are 12 to 14 inches deep, so the consumer had already allotted that much space. Pure flat screen CRT technology also was being advanced. The prototypes of the new flat CRT technology cost about 30 percent more than a traditional CRT model but were still 50 percent less expensive than a comparable LCD set.

News and information about Electron Tubes

News Wire

Wipo Publishes Patent of Toshiba Electron Tubes & Devices, Kabushiki Kaisha Toshiba, Hidero Anno, Tomonari Ishihara, Tetsuya Yonezawa, Harunobu Fukushima, Chiharu Tadokoro and Hitoshi Hattori for "Coolant Device, X-Ray Computer Tomography Device and X-Ray Computer Tomography Device Maintenance Method" (Japanese Inventors)
US Fed News Service, Including US State News; February 18, 2013; 432 words ...RAY COMPUTER TOMOGRAPHY DEVICE, AND X-RAY COMPUTER TOMOGRAPHY DEVICE MAINTENANCE METHOD."Applicants: Toshiba **Electron Tubes** & Devices Co. Ltd. (JP), KABUSHIKI KAISHA TOSHIBA (JP), Hidero Anno (JP), Tomonari Ishihara (JP), Tetsuya...

News Wire

US Patent Issued to Kabushiki Kaisha Toshiba, Toshiba Electron Tubes & Devices on Feb. 5 for "Radiation Detection Apparatus and Radiographic Apparatus" (Japanese Inventors)
US Fed News Service, Including US State News; February 9, 2013; 485 words ...States Patent no. 8,366,319, issued on Feb. 5, was assigned to Kabushiki Kaisha Toshiba (Tokyo) and Toshiba **Electron Tubes** & Devices Co. Ltd. (Tochigi-Ken, Japan)."Radiation Detection Apparatus and Radiographic Apparatus" was...

News Wire

US Patent Issued to Kabushiki Kaisha Toshiba, Toshiba Electron Tubes & Devices on Dec. 18 for "Image Intensifier" (Japanese Inventor)
US Fed News Service, Including US State News; December 24, 2012; 385

words ...States Patent no. 8,335,295, issued on Dec. 18, was assigned to Kabushiki Kaisha Toshiba (Tokyo) and Toshiba **Electron Tubes** & Devices Co. Ltd. (Tochigi-Ken, Japan)."Image Intensifier" was invented by Ryuichi Uduka (Yaita, Japan...

News Wire

Uspto Issues Trademark: Electron Tubes
US Fed News Service, Including US State News; November 6, 2012; 700+ words ...Nov. 6 -- The trademark **ELECTRON TUBES** (Reg. No. 4231889; International...consists of the black wording "**ELECTRON TUBES**" with the word "TUBES" enclosed...light-detecting instruments, **electron tubes**, radiation detectors, radiation...

News Wire

Wipo Publishes Patent of Kabushiki Kaisha Toshiba, Toshiba Electron Tubes & Devices, Homma Katsuhisa for "Radiation Detector" (Japanese Inventor)
US Fed News Service, Including US State News; August 17, 2012; 445 words ...Aug. 9. Title of the invention: "RADIATION DETECTOR." Applicants: KABUSHIKI KAISHA TOSHIBA (JP), TOSHIBA **ELECTRON TUBES** & DEVICES CO. LTD. (JP) and HOMMA Katsuhisa (JP). Inventors: Katsuhisa Homma (JP). According to the abstract...

News Wire

Contract Notice: Defense Logistics Agency (Ohio) Issues Solicitation for Electron Tubes
US Fed News Service, Including US State News; May 18, 2012; 241 words WASHINGTON, May 28 -- Defense Logistics Agency, DLA Acquisition Locations has a requirement for **electron tubes**. The solicitation no. SPM7M512TC347 was posted on May 11. All responses are due by May 28. Notice Type: Combined Synopsis...

News Wire

WIPO PUBLISHES PATENT OF TOSHIBA, TOSHIBA ELECTRON TUBES & DEVICES FOR "FLAT PANEL RADIATION IMAGER REFRESH OPERATION METHOD" (JAPANESE INVENTOR)
US Fed News Service, Including US State News; December 10, 2011; 346 words ...FLAT PANEL RADIATION IMAGER REFRESH OPERATION METHOD." Applicants: KABUSHIKI KAISHA TOSHIBA (JP) and Toshiba **Electron Tubes** & Devices Co., LTd. (JP). Inventors: Hiroshi Onihashi (JP). According to the abstract posted by the World...

News Wire

US Patent Issued to Toshiba Electron Tubes & Devices on April 17 for "Radiation Detector and Method for Manufacturing the Same" (Japanese Inventors)
US Fed News Service, Including US State News; April 25, 2012; 405 words ...ALEXANDRIA, Va., April 23 -- United States Patent no. 8,158,949, issued on April 17, was assigned to Toshiba **Electron Tubes** & Devices Co. Ltd. (Tochigi-Ken, Japan). "Radiation Detector and Method for Manufacturing the Same" was...

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PUBLIC

Jackson Declaration Exhibit B
(Wikipedia – Tube Sound)

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Tube sound

From Wikipedia, the free encyclopedia

Tube sound (or **valve sound**) is the characteristic sound associated with a vacuum tube-based audio amplifier.[1] The audible significance of tube amplification on audio signals is a subject of continuing debate among audio enthusiasts.[2]

Many electric guitar, electric bass, and keyboard players in a range of popular, rock, funk, blues, reggae and jazz genres also prefer the sound of tube instrument amplifiers or preamplifiers.

Vacuum tubes glowing inside the preamp section of a modern guitar amplifier.

Contents

History

Before the commercial introduction of transistors in the 1950s, electronic amplifiers used vacuum tubes (known in Great Britain as "valves"). By the 1960s, solid state (transistorized) amplification had become more common because of its smaller size, lighter weight, lower heat production, and improved reliability. Tube amplifiers have retained a loyal following amongst some audiophiles and musicians. Some tube designs command very high prices, and tube amplifiers have been going through a revival since Chinese and Russian markets have opened to global trade—tube production never went out of vogue in these countries.

Sound reproduction

Audiophiles may agree or disagree on the relative merits of tube vs solid state amplification. Some say they prefer the sound produced from tube amplifiers on the grounds that it is more natural and satisfying than the sound from transistor amplifiers. Otherwise this preference or difference is far too generalised or even vague without taking amplifier designs into consideration, and there are many. Certainly these audible differences are due to distortion types: harmonic, distribution, level and many other factors.

Those who subscribe to measurement and scientifically-based approaches to high fidelity note that in general, solid state designs can be manufactured without output transformers and are therefore immune to speaker-dependent impedance mismatches and other transformer effects which alter the system spectral response. On the other hand, ruler flat frequency response does not necessarily mean a good sounding amplifier. It should be noted that the loudspeaker itself (regardless of price) will likely produce more distortions (non-linearity and uneven frequency response) than any other part of the system. Typically, in sound reproduction systems, accurate reproduction of the sound of the original recording is the goal; distortion and uneven spectral response within the audible frequency band is something designers deliberately seek not to introduce.[3]

Musical instrument amplification

Some musicians[4] also prefer the distortion characteristics of tubes over transistors for electric guitar, bass, and other instrument amplifiers. In this case, generating deliberate (and sometimes considerable, in the case of electric guitars) audible distortion or overdrive is usually the goal. The term can also be used to describe the sound created by specially-designed transistor amplifiers or digital modeling devices that try to closely emulate the characteristics of the tube sound.

The tube sound is often subjectively described as having a "warmth" and "richness", but the source of this is by no means agreed on. It may be due to the non-linear clipping that occurs with tube amps, or due to the higher levels of second-order harmonic distortion, common in single-ended designs resulting from the characteristics of the tube interacting with the inductance of the output transformer.

See also: Distortion (guitar) and Guitar effects

Audible differences

The sound of a tube amplifier is partly a function of the circuit topologies typically used with tubes versus the topologies typically used with transistors, as much as the gain devices themselves. Beyond circuit design, there are other differences such as the electronic characteristics of a triode and MOSFET, or a tetrode and a bipolar

transistor.

The low frequency roll-off can be explained by many tube amplifiers having high output impedance compared to transistor designs, due to the combination of both higher device impedance itself and typically reduced feedback margins (more feedback results in a lower output impedance).

Harmonic content and distortion

Triodes (and MOSFETs) produce a monotonically decaying harmonic distortion spectrum. Even-order harmonics and odd-order harmonics are both natural number multiples of the input frequency.

Psychoacoustic phenomena include the effect that high-order harmonics are more offensive than low. Thus, in distortion measurements this should be taken into consideration to weight audible high-order harmonics more than low. The importance of high-order harmonics suggests that distortion should be regarded in terms of the complete series or of the composite wave-form that this series represents. It has been shown that weighting the harmonics by the square of the order correlates well with subjective listening tests. Weighting the distortion wave-form proportionally to the square of the frequency gives a measure of the reciprocal of the radius of curvature of the wave-form, and is therefore related to the sharpness of any corners on it.[5] Based on said discovery, highly sophisticated methods of weighting of distortion harmonics have been developed.[6] Since they concentrate in the origins of the distortion, they are mostly useful for the engineers who develop and design audio amplifiers, but on the other hand they may be difficult to use for the reviewers who only measure the output.[7]

Push-pull amplifiers use two nominally identical gain devices "back to back". One consequence of this is that all even-order harmonic products cancel, leaving odd order products to dominate.[8] A push-pull amplifier is said to have a symmetric (odd symmetry) transfer characteristic, and accordingly produces only odd harmonics.

A single-ended amplifier has an asymmetric transfer characteristic, and produces both even *and* odd harmonics.[9][10][11] As tubes are often run single-ended, and semiconductor amplifiers are often push-pull, the types of distortion are incorrectly attributed to the devices (or even the amplifier class) instead of the topology. Push-pull tube amplifiers can be run in class A, AB, or B. Also, a class B amplifier may have crossover distortion that will be typically high order and thus sonically very undesirable indeed.[12]

Another factor is that the distortion content of class A circuits (SE or PP) typically monotonically reduces as the signal level is reduced, asymptotic to zero during quiet passages of music. For this reason class A amplifiers are especially desired for classical and acoustic music etc. cf. class B and AB amplifiers, for which the amplitude of the crossover distortion is more or less constant, and thus the distortion *relative to signal* in fact increases as the music gets quieter. Class A amplifiers measure best at low power, class AB and B amplifiers measure best just below max rated power.

Loudspeakers present a reactive load to an amplifier (capacitance, inductance and resistance). This impedance may vary in value with signal frequency and amplitude. This variable loading affects the amplifier's performance both because the amplifier has finite output impedance (it cannot keep its output voltage perfectly constant when the speaker load varies) and because the phase of the speaker load can change the stability margin of the amplifier. The influence of the speaker impedance is different between tube amplifiers and transistor amplifiers, principally because tube amplifiers normally use output transformers, and cannot use as much negative feedback due to phase problems in transformer circuits. A notable exception is Berning's unique tube-transformerless "ZOTL" circuit.

The design of speaker crossover networks and other electro-mechanical properties may result in a speaker with a very uneven impedance curve, for a nominal 8 Ω speaker, being as low as 6 Ω at some places and as high as 30–50 Ω elsewhere in the curve. An amplifier with little or no negative feedback will always perform poorly when faced with a speaker where little attention was paid to the impedance curve.

Design comparison

There has been considerable debate over the characteristics of tubes versus bipolar junction transistors. Triodes and MOSFETs have certain similarities in their transfer characteristics, whereas later forms of the tube, the tetrode and pentode, have quite different characteristics that are in some ways similar to the bipolar transistor. Despite this, e.g. MOSFET amplifier circuits typically do not reproduce tube sound any more than typical bipolar designs, due to the *circuit topology differences* between a typical tube design and a typical MOSFET design. But there are exceptions, for example designs such as the Zen series by Nelson Pass.

Input impedance

A characteristic feature of most tube amplifier designs is the high input impedance (typically 100 kΩ or more) in modern designs and as much as 1 MΩ in classic designs.[13] The input impedance of the amplifier is a load for the source device. Even for some modern music reproduction devices the recommended load impedance is over 50 kΩ.[14][15] This implies that the input of an average tube amplifier is a problem-free load for music signal sources. By contrast, some transistor amplifiers for home use have lower input impedances, as low as 15 kΩ.[16] Since it is possible to use high output impedance devices due to the high input impedance, other factors may need to be accounted for, such as cable capacitance and microphonics in such cases.

Output impedance

Audio amplifiers are usually loaded by loudspeakers and in the history nearly all loudspeakers have been electrodynamic loudspeakers, while there exists also minority of electrostatic loudspeakers and some other even more exotic loudspeakers. Electrodynamic loudspeakers transform electric current to force and force to acceleration of the diagraphm which causes sound pressure. Due to the principle of an electrodynamic speaker, most loudspeaker drivers ought to be driven by an electric current signal. In an ideal current or transconductance amplifier the output impedance approaches infinity, while practically all commercial audio amplifiers are voltage amplifiers, and their output impedances have been intentionally developed to approach zero. Due to the nature of vacuum tubes and audio transformers, the output impedance of an average tube amplifier is usually considerably higher than of the modern audio amplifiers produced completely without vacuum tubes or audio transformers. Thus, most tube amplifiers with their higher output impedance are closer to the idea of a transconductance amplifier than the solid state voltage amplifiers. The current signal drives the electrodynamic speaker more accurately, causing less distortion than a voltage signal.[17][18][19]

Soft clipping

Soft clipping is a very important aspect of tube sound especially for guitar amplifiers, although a Hi-fi amplifier should not normally ever be driven into clipping. The harmonics added to the signal are of lower energy with soft clipping than hard clipping. However, soft clipping is not exclusive to tubes, it can be simulated in transistor circuits (below the point that real hard clipping would occur). (See "Intentional distortion" section).

Large amounts of negative feedback are not available in tube circuits, due to phase shift in the output transformer, and lack of sufficient gain without large numbers of tubes. With lower feedback, distortion is higher and predominantly of low order. The onset of clipping is gradual. Large amounts of feedback, allowed by transformerless circuits with many active devices, leads to numerically lower distortion but with more high harmonics, and harder clipping—as input increases, the feedback uses the extra gain to ensure that the output follows it accurately until the amplifier has no more gain to give and the output saturates.

In the recording industry and especially with microphone amplifiers it has been shown that amplifiers are often overloaded by signal transients. There is a major difference in the harmonic distortion components of the amplified signal, with tubes, transistors, and operational amplifiers separating into distinct groups.[20][21]

Bandwidth

Early tube amplifiers often had limited response bandwidth, in part due to the characteristics of the inexpensive passive components then available. In power amplifiers most limitations come from the output transformer; low frequencies are limited by primary inductance and high frequencies by leakage inductance and capacitance. Another limitation is in the combination of high output impedance, decoupling capacitor and grid resistor, which acts as a high-pass filter. If interconnections are made from long cables (for example guitar to amp input), a high source impedance with high cable capacitance will act as a low-pass filter.

Modern premium components make it easy to produce amplifiers that are essentially flat over the audio band, with less than 3 dB attenuation at 6 Hz and 70 kHz, well outside the audible range.

Negative feedback

Tube amplifiers could not use as much negative feedback (NFB) as transistor amplifiers due to the large phase shifts caused by the output transformers and their lower stage gains. While the absence of NFB greatly increases harmonic distortion, it avoids instability, as well as slew rate and bandwidth limitations imposed by dominant-pole compensation in transistor amplifiers. Since transient intermodulation distortion was mainly caused by negative feedback,[22][23] tube sound never suffered much of that kind of distortion.

Power supplies

Early tube amplifiers usually had unregulated power supplies. This was due to the high cost of a regulating element, and the relative insensitivity of the power output stage to voltage variations. The typical anode supply was a rectifier, perhaps half-wave, a choke (inductor) and a filter capacitor. When the tube amplifier was operated at high volume, the power supply voltage would dip as the amplifier draws more current (assuming class AB), reducing power output and causing signal modulation. This dipping effect is known as "sag", which may be desirable effect for some electric guitarists when compared with hard clipping. As the amplifier load or output increases this voltage drop will increase distortion of the output signal. Sometimes this sag effect is desirable for guitar amplification.

Some instrument tube amplifier designs use a vacuum tube rectifier instead of silicon diodes. A solid state rectifier arrangement could introduce audible noise (switching noise) into the amplifier, but only if poorly implemented, this may be audible as a buzzing sound at typically twice mains supply frequency.[24] The voltage sag of a tube rectifier can be emulated with silicon rectifiers, by adding a resistance in series with the high voltage supply. This resistance can be switched in when required.

Electric guitar amplifiers often use a class AB_1 amplifier. In a class A stage the average current drawn from the supply is constant with signal level, consequently it does not cause supply line sag until the clipping point is reached. Other audible effects due to using a tube rectifier with this amplifier class are unlikely.

One possible practical advantage of tube rectification is that the rectifier tube takes some time to warm up before it begins to conduct. This will allow a little time for the output tube heaters to warm up somewhat and allow them to start conducting before the high voltage (HT) reaches full potential allowing a soft start, possibly extending their lifespan. Some say that if the full high voltage supply (HT) is present during the warm up process, on output tubes, cathode damaged may result.

Some high end manufacturers, such as Welborne Labs in their premium kits, use silicon diodes on the basis that the cost and power required to operate a vacuum tube rectifier does not yield any measurable improvement in the sound.

Blackheart 5 W single-ended class A guitar amplifier chassis, with additional GZ34 valve rectifier installed.

Class A

The benefit of all Class A amplifiers is the absence of crossover distortion. This crossover distortion was found especially annoying after the first silicon-transistor Class B and Class AB transistor amplifiers arrived on the consumer market; earlier germanium-based designs with the much lower turn-on voltage of this technology and the non-linear response curves of the devices had not shown large amounts of cross-over distortion. Although crossover distortion is very fatiguing to the ear and perceptible in listening tests, it is also almost invisible (until looked for) in the traditional Total harmonic distortion (THD) measurements of that epoch.[25]

Push-pull amplifiers

A Class A push-pull amplifier produces low distortion for any given level of applied feedback, and also cancels the flux in the transformer cores, so this topology is often seen by HIFI-audio enthusiasts and do-it-yourself builders as the ultimate engineering approach to the tube Hi-fi amplifier for use with normal speakers. Output power of as high as 15 watts can be achieved even with classic tubes such as the 2A3[26] or 18 watts from the type 45. Classic pentodes such as the EL34 and KT88 can output as much as 60 and 100 watts respectively. Special types such as the V1505 can be used in designs rated at up to 1100 watts. See "An Approach to Audio Frequency Amplifier Design", a collection of reference designs originally published by G.E.C.

Single-Ended Triode (SET) amplifiers

SET amplifiers typically show poor measurements for distortion with a resistive load, have low output power, are inefficient, have poor damping factors and high measured harmonic distortion. But they perform somewhat better in dynamic and impulse response.

The triode, despite being the oldest signal amplification device, also can (depending on the device in question) have a more linear no-feedback transfer characteristic than more advanced devices such as beam tetrodes and pentodes.

Audiophiles who prefer SET-amplifiers state that measured sound performance is a poor indicator of real world sound performance and distortion level is not the only criterion for good sound reproduction. There are measurements not using resistive load but actual loudspeakers to back this up. In the 1970s, designers started

producing transistor amps with higher open loop gain to support a greater value of negative feedback. In the following years, amplifiers were built with modest gain but good open loop linearity, deployed with only minimal levels of NFB.

All amplifiers distort, so do SETs. This for the most part harmonic distortion is a distortion with a unique pattern of simple and monotonically decaying series of harmonics, dominated by modest levels of second harmonic. The result is like adding the same tone one octave higher. The added harmonic tone is lower, at about 1–5% or less in a no feedback amp at full power and rapidly decreasing at lower levels. It has been also claimed that a single-ended power amplifier's second harmonic distortion could reduce similar harmonic distortion in a single driver loudspeaker, if their harmonic distortions were equal and amplifier was connected to the speaker so that the distortions would neutralize each other.[27][28]

SETs usually only produce about 2 watt (W) for a 2A3 tube amp to 8 W for a 300B up to the practical maximum of 40 W for a 805 tube amp. The resulting sound pressure level depends on the sensitivity of the loudspeaker and the size and acoustics of the room as well as amplifier power output. Their low power also makes them ideal for use as preamps. SET amps have a power consumption of a minimum of 8 times the stated stereo power. For example a 10 W stereo SET uses a minimum of 80 W, and typically 100 W.

Single-ended pentode and tetrode amplifiers

The special feature among tetrodes and pentodes is the possibility to obtain ultra-linear or distributed load operation with an appropriate output transformer. Ultra-linear connection is a negative feedback method, enabling less harmonic distortion.

Class AB

The majority of modern commercial Hi-fi amplifier designs have until recently used Class AB topology (with more or less pure low-level Class A capability depending on the standing bias current used), in order to deliver greater power and efficiency, typically 12–25 watts and higher. Modern designs normally include at least some negative feedback, although in the old times of High fidelity use of feedback was totally out of question. It should however be noted that Class D topology (which is vastly more efficient than Class B, and has garnered some respect from audiophiles) is more and more frequently applied where traditional design would use Class AB.

Class AB push-pull topology is nearly universally used in tube amps for electric guitar applications that produce power of more than about 10 watts. Whereas audiophile amps are primarily concerned with avoiding distortion, a guitar amp embraces it. When driven to their respective limits, tubes and transistors distort quite differently. Tubes clip more softly than transistors, allowing higher levels of distortion (which is sometimes desired by the guitarist) whilst still being able to distinguish the harmonies of a chord. This is because the soft profile of the tube amplifier's distortion means that the intermodulation products of the distortion are generally more closely related to the harmonies of the chord. All sides of the question are inclined to agree about valve guitar amplifiers offering a very useful sound, though there are also some well-respected solid-state designs.

Intentional distortion

Tube sound from transistor amplifiers

Some individual characteristics of the tube sound, such as the waveshaping on overdrive, are straightforward to produce in a transistor circuit or digital filter. For more complete simulations, engineers have been successful in developing transistor amplifiers that produce a sound quality very similar to the tube sound. Usually this involves using a circuit topology similar to that used in tube amplifiers.

In 1982, Tom Scholz, a graduate of MIT and a member of *Boston*, introduced the Rockman, which used bipolar transistors, but achieved a distorted sound adopted by many well known musicians. Advanced digital signal processing offers the possibility to simulate tube sound. Computer algorithms are currently available that transform digital sound from a CD or other digital source into a distorted digital sound signal.

Using modern passive components, and modern sources, whether digital or analogue, and wide band loudspeakers, it is possible to have tube amplifiers with the characteristic wide bandwidth and "fast" sound of modern transistor amplifiers, including using push-pull circuits, class AB, and feedback. Some enthusiasts have built amplifiers using transistors and MOSFETs that operate in class A, including single ended, and these often have the "tube sound".[29]

Hybrid amplifiers

Tubes are often used to impart characteristics that many people find audibly pleasant to solid state amplifiers, such as Musical Fidelity's use of Nuvistors, tiny triode tubes, to control large bi-polar transistors in their NuVista 300 power amp. In America, Moscode and Studio Electric use this method, but use MOSFET transistors for power, rather than bi-polar. Pathos, an Italian company, has developed an entire line of hybrid amplifiers.

To demonstrate one aspect of this effect, one may use a light bulb in the feedback loop of an infinite gain multiple feedback (IGMF) circuit. The slow response of the light bulb's resistance (which varies according to temperature) can thus be used to moderate the sound and attain a tube-like "soft limiting" of the output, though other aspects of the "tube sound" would not be duplicated in this exercise.

Tube sound enthusiasts

Different uses of tube amplifiers can be found due to the different personal preferences of the enthusiasts. From those who opt to restrict their use as active devices to those who opt to include them in the audio circuit, accepting the use of semiconductor gain devices in the power supply or as constant current sources. Others, still, will use tubes for the main amplification circuit but add semiconductors (such as solid-state diodes) for clipping purposes, particularly in the preamp section, which is often debated in advertised vintage instrument amplifiers such as the Marshall JCM900 or the Vintage Modern as to their integrity due to their utilization of solid-state devices in the tone-generation circuit. Other schisms concern the use of triodes vs. tetrodes and pentodes, and the use of directly heated tubes vs. indirectly heated tubes.

Directly heated triodes.

Many of the explanations relate to the circuit topologies pioneered using tubes, and traditionally associated with them ever since, regardless of whether they are built using tubes today, notably the directly heated single-ended triode amplifier circuit, which operates in class A and often has no external negative feedback; this topology is a classic source of the tube sound.

Feedback paths coupled through the secondary of the output transformer reduce distortion because they compensate for the transformer's distortion to some extent. However only limited NFB can be used around the transformer, as there is phase lag caused by the transformer, and this causes instability if NFB is incorrectly (without any phase / frequency correction) used.

See also

- Audio system measurements
- British Valve Association
- European triode festival
- Virtual Valve Amplifier

Notes

1. ^ van der Veen, M. (2005). "Universal system and output transformer for valve amplifiers" (http://www.mennovanderveen.nl/nl/download/download_3.pdf). *118th AES Convention, Barcelona, Spain*. http://www.mennovanderveen.nl/nl/download/download_3.pdf.
2. ^ Branch, John D. (2007-05-23). "Postmodern Consumption and the High-Fidelity Audio Microculture". In Russell Belk, Russell Belk Jr., John Sherry (eds.). *Consumer Culture Theory, Volume 11 (Research in Consumer Behavior)* (1 ed.). JAI Press. pp. 79–99. ISBN 0-7623-1446-X.
3. ^ The Noisy Audiophile. "'Noisy' on Tubes vs. Solid State" (http://www.soundstage.com/noisy04.htm) in *SoundStage!*, March 1996.
4. ^ For example, Robert Walser *Running with the Devil: power, gender, and madness in heavy metal music*, Wesleyan University Press, 1993 ISBN 0-8195-6260-2 pages 43-44 discusses the "tube sound" sought by Eddie Van Halen
5. ^ Shorter, D. E. L. (April 1950). "The Influence of High-Order Products in Non-Linear Distortion". *Electronic Engineering* (London, UK) **22** (266): 152–153. "That high-order harmonics are more offensive than low has long been recognised..."
6. ^ Geddes, Earl R.; Lee, Lidia W. (October 2003). "Auditory Perception of Nonlinear Distortion" (http://hephaestusaudio.com/media/2008/11/distortion_aes_ii.pdf) (PDF). *AES 115th Convention*. AES 115th Convention (http://www.aes.org/events/115/). New York, New York: Audio Engineering Society. http://hephaestusaudio.com/media/2008/11/distortion_aes_ii.pdf.
7. ^ Howard, Keith (September 2005). "Weighting up" (http://www.gedlee.com/downloads/THD_.pdf) (PDF). *Multi Media Manufacturer* (Peterborough, New Hampshire: Audio Amateur): 7–11.
8. ^ A First Course in Electronics, pg 414-416. Anwar A. Khan and Kanchan K. Dey
9. ^ Ask the Doctors: Tube vs. Solid-State Harmonics (http://www.uaudio.com/webzine/2005/october/content/content2.html)—Universal Audio Webzine
10. ^ Volume cranked up in amp debate (http://www.trueaudio.com/at_eetjlm.htm)—Electronic Engineering Times
11. ^ W. Bussey and R. Haigler (1981). "Tubes versus transistors in electric guitar amplifiers" (http://milbert.com/articles/tubes_vs_transistors_in_electric_guitar_amps). *IEEE International Conference on Acoustics, Speech, and Signal Processing*. pp. Volume 6 p. 800–803. http://milbert.com/articles/tubes_vs_transistors_in_electric_guitar_amps.
12. ^ Meusburger, Walter (October 1999). "4 Crossover Distortion in Class B" (http://www.moehrenbude.de/Moehre/images2/download/No_Crossoveramp_W.Meusberger.pdf) (PDF). *A Novel Power Amplifier Topology Without Crossover Distortion* (D.Tech. thesis). Graz, Austria: Graz University of Technology. p. 27. Retrieved 2011-03-18. "Crossover distortion generates unpleasant high order harmonics with the potential to increase in percentage as signal level falls and is much more objectionable to the listener than distortion resulting from a smoothly curved characteristic, even if they have the same THD. Therefore it is desirable to reduce crossover distortion to a minimum amount."
13. ^ "Three-valve Stereophonic Amplifier". *Mullard Tube Circuits for Audio Amplifiers* (2nd ed.). Peterborough,

New Hampshire: Audio Amateur Press. 1959. p. 123. ISBN 1-882580-03-6.
14. ^ Sony Corporation 1999. Sony compact disc player CDP-XB930 Operating Instructions. (1). Specifications, p.20.
15. ^ *CDP-XB930/XB930E service manual* (http://www.qrz.ru/schemes/redirect.phtml?id=14227) (PDF). Japan: Sony Corporation. 1999. p. 1.
16. ^ Rotel stereo integrated amplifier RA-935BX owners manual. MN10002975-A. p.4
17. ^ Mills, Paul G. L.; Hawksford, M. O. J. (March 1989). "Distortion Reduction in Moving-Coil Loudspeaker Systems Using Current-Drive Technology". *Journal of Audio Engineering Society* (University of Essex, Wivenhoe Park, Colchester, Essex, CO4 3SQ, UK) **37** (3): 129–148.
18. ^ Meriläinen, Esa (February 2010). "5.7 The Secret of Tube Amplifiers". *Current-Driving of Loudspeakers*. Createspace. pp. 111–112. ISBN 1-4505-4400-2. "The most significant differences are, however, found in the output impedance. The output impedance of transistor amplifiers is typically less than 0.1 Ω, which denotes pure voltage feed for the speaker. In tube amplifiers, instead, the output impedance varies rather widely; from tenths of an ohm to even more than five ohms (with 8 Ω loading). A source impedance of even a couple of ohms is able to weaken the speaker's EMF currents so that the effects are observable; and as the value exceeds 5 Ω, the speaker may function at some frequencies even halfly current-driven."
19. ^ "The Caged Frog -- A Pentode Based Transconductance Amplifier for Headphones" (http://www.ecp.cc/CagedFrog.html). ecp.cc. 22 August 2010. Retrieved 14 October 2012. "But, as I was about to disassemble it and put the parts away, I wondered what the circuit would sound like without any feedback. That is, just a pentode with a transformer load. I figured it was going to be awful, so I was not prepared for what I heard, which was near sonic bliss. From note one, this was something special. Turns out, I had built a transconductance amp more or less by accident."
20. ^ Hamm, Russell O. (May 1973). "Tubes Versus Transistors –Is There an Audible Difference?". *J Audio Eng Soc* (New York: Audio Engineering Society) **21** (4): 267–273. Lay summary (http://www.aes.org/e-lib/browse.cfm?elib=1980) – *AES*. "This paper, however, points out that amplifiers are often severely overloaded by signal transients (THD 30%). Under this condition there is a major difference in the harmonic distortion components of the amplified signal, and operational amplifiers separating into distinct groups."
21. ^ Hamm, Russell O. "Tubes Versus Transistors –Is There an Audible Difference?" (http://www.milbert.com/tstxt.htm). Milbert Amplifiers. Retrieved 19 July 2009.
22. ^ Tapio M. Köykkä, "Katkoäänien rikkoutuminen äänentoistossa" (in Finnish), *ERT* (Elektroniikka-Radio-TV), vol. 22, no. 1, pp. 27–32, 1969
23. ^ Matti Otala, "Transient Distortion in Transistorized Audio Power Amplifiers", IEEE Transactions on Audio and Electroacoustics vol. AU-18, No. 3 September 1970
24. ^ S5 Electronics K-12M Tube Amp (http://www.siteswithstyle.com/VoltSecond/K-12M_AMP/K-12M_Push_Pull.html)
25. ^ Langford-Smith, F. (1952). "14 Fidelity and distortion" (http://www.pmillett.com/Books/RDH4.pdf) (PDF). *Radiotron Designer's Handbook* (4th ed.). Sydney, Australia: Wireless Press. p. 610. "One interference which may reasonably be drawn is that any sharp kinks in the linearity curve, as usually occur in any Class AB_1 or AB_2 amplifier, have a far more serious subjective effect than is indicated by any of the standard methods of measuring distortion –whether total harmonic distortion, conventional weighted distortion factor or the standard form of intermodulation testing."
26. ^ Pete Millett's DIY Audio pages. Tube data. *RCA 2A3 Power Triode*. (http://www.pmillett.com/tubedata/HB-3/Receiving_Tubes_Part_1/2A3.PDF)
27. ^ About distortion behavior between SE amplifiers and speakers (http://www.audiopax.com/papers_part1.htm), Eduardo de Lima
28. ^ System distortion (http://gboers.xs4all.nl/daisy/home/g3/139/g1/loudspeakers/systemdistortion.html), Gerrit Boers
29. ^ Olsher, Dick (July 2001). "The Volksamp Aleph 30 SE Power Amplifier (product review)" (http://www.enjoythemusic.com/magazine/equipment/0701/volksamp.htm). *Enjoy the Music.com*. 5th paragraph. "It effectively bridges the gap between solid-state and tube sound, blending tube and transistor virtues into a musically satisfying whole."

References

- Barbour, Eric. The Cool Sound of Tubes (http://www.spectrum.ieee.org/print/1640) in *IEEE Spectrum Online*.
- Hamm, Russell O. (September 14, 1972). "Tubes vs. Transistors: Is There An Audible Difference?" (http://milbert.com/Files/articles/TvsT/tstxt.pdf). Presented at the 43rd convention of the Audio Engineering Society, New York.
- Reisch, George. Scientists vs Audiophiles 1999 (http://stereophile.com/thinkpieces/165/) in *Stereophile*, March, 1999.
- Tube Data Archive (http://tubedata.milbert.com) - Massive collection (many gigabytes) of scanned original tube data sheets and technical information.

Jackson Declaration Exhibit C
(Home Theater Webpage)

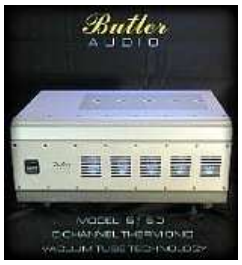
PUBLIC

Vacuum Tube Rebels

Vacuum Tube Audio In The 21st Century (So Far)

By Robert Silva, About.com Guide

In the 21st century, we marvel at the wonders of the new technologies that have made our life easier and more enjoyable. In home electronics and home theater these days, "digital" rules. From the humble beginnings of the transistor we now have everything from microprocessors to such digital products as the CD, SACD, DVD Video, DVR/PVR, HDTV, Blu-ray Disc, Network Media Players/Streamers, and of course, we can't overlook the extremely popular iPod. But many of us still remember the analog world of the Vacuum Tube, the trusted workhorse that started the whole home electronics boom in the first place.



Butler Audio 5150 5-channel Vacuum Tube Hybrid Power Amplifier
Image (c) Butler Audio

The Eastern European Connection

Believe it or not, the vacuum tube is not only still with us (television CRTs are a type of vacuum tube), but as a side benefit of the fall of Eastern Europe and The Soviet Union, the traditional vacuum tube is becoming a more common site in Western high-end audio products. With U.S. and Asian companies firmly entrenched in production of digital solid state devices, countries that had previously been behind the digital curve such as Russia, Eastern Europe, and even China still have large tube manufacturing facilities and thus, have been producing and exporting vacuum tubes to the West more freely in the last decade or so. As a result, the high end audio market has tapped into this phenomenon like gangbusters.

Vacuum Tube HiFi Components

Many "true" audiophiles have never been completely satisfied with the sound quality and performance of transistors and integrated circuits, therefore, a niche market has opened up for vacuum tube audio equipment. Manufacturers, such as Audio Research, Cary Audio, ECP Audio, Granite Audio, Manley Labs, McIntosh, Rogue Audio, and others are also quenching the thirst for vacuum tube products with their exceptional lineup of home audio equipment.

In fact, even the iPod hasn't escaped the vacuum tube treatment as there are now an ever-growing assortment of iPod vacuum tube audio systems

Home Theater Applications

The Vacuum Tube has also made its way into the home theater environment, with products, such as: The Jolida Vacuum Tube CD Player, and the Rockford Fosgate FAP-V1 5.1 Channel/Dolby Pro-Logic II Preamp. Add a multi-channel hybrid vacuum tube power amplifier, such as the Butler Audio Model 5150, and you can have a vacuum tube based home theater audio system.

Vacuum tube audio for home theater hasn't gone unnoticed by big player Samsung, who has introduced a line of vacuum products, including an Audio Dock and two Home Theater-in-a-Box Systems.

Vacuum Tubes In Your Ear and On The Road

In addition to home audio and home theater vacuum tube-based products, other innovative applications for vacuum tubes in audio also include the Apex Audio and Vincent Audio Vacuum Tube Headphone Amplifiers. Also, for those who can't leave their vacuum tubes at home, companies such as Butler Audio (Tube Driver) and Milbert Amplifiers produce a line of unique vacuum tube car audio products.

Sources For News and Information On Vacuum Tube Products

There are several print and online publications, including *Audiophilia*, *The Absolute Sound*, *Superior Audio*, and *Stereophile Magazine* that regularly present and review vacuum tube audio products.

The Vacuum Tube Lives On

Even with all the emphasis on digital technology in the new century, the vacuum tube is making a big comeback with audio aficionados (or did it really ever leave?). Some say that the warm, glowing sound of a good vacuum tube amplifier has no equal.

I still have fond memories (early 70's) of owning a Dynaco Stereo-70 tube power-amp which, today, is considered a true "classic" in tube audio technology. Its design changed through the years and was discontinued for a time, but has now been revived with a new design, at a much higher price than I would have paid in my college years. Check out a review of the Dynaco Stereo-70 by Stereophile Magazine .

Supported by continuing loyalty from the audiophile community and audiophile press, in addition to increased profits for Russian, Eastern European, and Chinese suppliers, the vacuum tube's continued success might just be insured, despite the digital revolution.

Do you own any "classic" vacuum tube audio products or a new high-end vacuum tube product? If you would like to share your experiences with these products or just throw in your two-cents on the virtues of vacuum tube technology, post to my Vacuum Tube Audio Forum.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

In the Matter of Registration Nos. 2985751; and 3394514

Dated: August 16, 2005 & March 11, 2008, Respectively

Thomas Sköld, Petitioner v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

LETTER

The undersigned had unsuccessfully sought permission of the Interlocutory Attorney to file the Cross Motion for Partial Summary Judgment component of the filing he makes today. On further consideration, it appears quite clear that the permission to Registrant to file its Motion for Summary Judgment carried a permission for Petitioner to file this motion, relevant to answering the Registrant's motion.

Respectfully submitted,

Date: May 15, 2013 By: _____

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Thomas Sköld, Petitioner, v. Galderma Laboratories, Inc., Registrant	)	Cancellation No. 92052897

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Letter was sent by email on this 15th of May, 2013 to:

Jeff.Becker@haynesboone.com

Arthur E. Jackson